# Study Title COMBINED CHRONIC TOXICITY/ONCOGENICITY STUDY 2-YEAR ORAL GAVAGE STUDY IN RATS

Laboratory Project ID:

#### Volume 10 of 13

Number of pages in volume: Test Guidelines:	<ul> <li>U.S. EPA Health Effects Test Guidelines OPPTS 870.4300 Combined Chronic Toxicity/Carcinogenicity (1998)</li> <li>OECD Guidelines for the Testing of Chemicals Section 4 (No. 453) Health Effects (2009)</li> <li>JMAFF Japan Agricultural Chemicals Regulation Law 12 Nousan No. 8147 (2000)</li> <li>EEC Methods for the Determination of Toxicity Method B.33 Combined Chronic/Carcinogenicity test, Directive 88/302/EC (1988)</li> </ul>
AUTHOR:	
STUDY COMPLETED ON:	March 28, 2013
APPLICANT/SPONSOR:	
PERFORMING LABORATORY:	
WORK REQUEST NUMBER:	
SERVICE CODE NUMBER:	

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Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1318	Е	Microscopic	
		salivary gland, sublingual	- within normal limits
		seminal vesicles	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- hyperplasia, epidermal, mild
			corresponds to macroscopic observation (skin - abrasion/scab)
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- astrocytoma, malignant, primary, fatal, positive cause of death
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		testes	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1318	E	Microscopic ureters urinary bladder Cause of Death	<ul><li>within normal limits</li><li>within normal limits</li><li>spinal cord tumor</li></ul>
1319	S	Macroscopic lymph node, inguinal	<ul> <li>not identified, right, no grade draining node for mass a.</li> </ul>
		skin, subcutis	<ul> <li>mass, tan, mass a, right inguinal area, present corresponds to antemortem observation (nodule) approximately 0.5 cm in diameter.</li> </ul>
		testes	- discoloration, red, right, moderate

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1319	S	Microscopic	
		adrenal glands	- hyperplasia, focal cortical, unilateral, minimal
			<ul> <li>hyperplasia, focal medullary, unilateral, mild</li> </ul>
			- necrosis, unilateral, mild
			<ul> <li>vacuolation, focal, unilateral, minimal</li> </ul>
			two sets of adrenals submitted with this animal from necropsy. one set has only medullary hyperplasia.
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		coagulating glands	- within normal limits
		epididymides	<ul> <li>oligospermia/germ cell debris, unilateral, severe</li> </ul>
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits

S - Scheduled necropsy

50 mg/kg/day 1319  S  Microscopic harderian glands heart joint, tibiofemoral kidneys lacrimal glands, exorbital large intestine, cecum large intestine, colon large intestine, rectum larynx liver	within normal limits cardiomyopathy, minimal within normal limits nephropathy, chronic progressive, bilateral, mild within normal limits within normal limits
1319  S  Microscopic harderian glands heart joint, tibiofemoral kidneys lacrimal glands, exorbital large intestine, cecum large intestine, colon large intestine, rectum larynx liver	cardiomyopathy, minimal within normal limits nephropathy, chronic progressive, bilateral, mild within normal limits
harderian glands heart joint, tibiofemoral kidneys lacrimal glands, exorbital large intestine, cecum large intestine, colon large intestine, rectum larynx liver	cardiomyopathy, minimal within normal limits nephropathy, chronic progressive, bilateral, mild within normal limits
joint, tibiofemoral kidneys lacrimal glands, exorbital large intestine, cecum large intestine, colon large intestine, rectum larynx liver	within normal limits nephropathy, chronic progressive, bilateral, mild within normal limits
kidneys lacrimal glands, exorbital large intestine, cecum large intestine, colon large intestine, rectum larynx liver	nephropathy, chronic progressive, bilateral, mild within normal limits
kidneys lacrimal glands, exorbital large intestine, cecum large intestine, colon large intestine, rectum larynx liver	within normal limits
large intestine, cecum large intestine, colon large intestine, rectum larynx liver	within normal limits
large intestine, cecum large intestine, colon large intestine, rectum larynx liver	within normal limits
large intestine, rectum larynx liver	
larynx liver	within normal limits
larynx liver	within normal limits
lung	within normal limits
lung	degeneration, cystic, focal, minimal
5	focus of cellular alteration, eosinophilic, minimal
5	hematopoiesis, extramedullary, minimal
5	hyperplasia, bile duct, minimal
ly manufacture and the state of	within normal limits
lymph node, mandibular	within normal limits
lymph node, mesenteric	within normal limits
nerve, sciatic	degeneration, axonal/myelin, minimal
nose, level a	acgeneration, axonalimiyelin, mililina
nose, level b	within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1319	S	Microscopic	
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		pancreas	<ul> <li>adenoma, acinar cell, benign, primary, incidental, not cause of death</li> </ul>
			- hyperplasia, acinar cell, focal, mild
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
		prostate gland	- within normal limits
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		seminal vesicles	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		skin, subcutis	- fibroma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
		small intestine, duodenum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1319	S	Microscopic	
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		testes	<ul> <li>adenoma, interstitial cell, benign, unilateral, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (testes - discoloration, red)
			<ul> <li>hyperplasia, interstitial cell, unilateral, minimal</li> </ul>
		thymus	- depletion, lymphoid, generalized, severe
			two sets of thymus submitted from necropsy. both have same microscopic finding.
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1319	S	Microscopic ureters urinary bladder	<ul><li>within normal limits</li><li>within normal limits</li></ul>
1320	E	Macroscopic pituitary gland stomach, nonglandular	<ul><li>enlarged, moderate</li><li>swollen/thickened, mild</li></ul>
1320	E	Microscopic adrenal glands aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum brain coagulating glands epididymides esophagus	<ul> <li>within normal limits</li> <li>compression, ventral (pituitary tumor), mild</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> </ul>

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1320	Е	Microscopic	
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
		•	- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- within normal limits
		lung	- histiocytosis, alveolar, minimal
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		nerve, sciatic	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1320	E	Microscopic	
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		pancreas	- hyperplasia, acinar cell, focal, minimal
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		prostate gland	- within normal limits
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		seminal vesicles	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1320	Е	Microscopic	
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- erosion/ulcer, severe
			corresponds to macroscopic observation (stomach, nonglandular - swollen/thickened)
		testes	- hyperplasia, interstitial cell, bilateral, minimal
		thymus	- depletion, lymphoid, generalized, severe
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		Cause of Death	- pituitary tumor

			Torrina
Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1321	D	Macroscopic	
		pituitary gland	- enlarged, minimal
1321	D	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
		aorta	- within normal limits
	bone marrow, femur	- within normal limits	
	bone marrow, sternum	- within normal limits	
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
	eyes, optic nerves	- within normal limits	
	eyes, retina	- not examined	
			autolysis too severe for diagnosis
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
) mg/kg/day			
1321	D	Microscopic	
		joint, tibiofemoral	- within normal limits
		kidneys	- within normal limits
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- within normal limits
		lung	- histiocytosis, alveolar, minimal
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, minimal
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1321	D	Microscopic	
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	- within normal limits
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations	
0 mg/kg/day				
1321	D	Microscopic		
		thymus	- depletion, lymphoid, generalized, severe	
		thyroid gland	- within normal limits	
		tongue	- within normal limits	
		trachea	- within normal limits	
		ureters	- within normal limits	
		urinary bladder	- within normal limits	
		uterus with cervix	- within normal limits	
		vagina	- within normal limits	
		non-correlated macro observation	- pituitary gland - enlarged	
		Cause of Death	- undetermined	
1323	D	Macroscopic		
		all tissues	- within normal limits	
1323	D	Microscopic		
		adrenal glands	- within normal limits	
		aorta	- within normal limits	
		bone marrow, femur	- within normal limits	

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1323	D	Microscopic	
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- not examined
			autolysis too severe for diagnosis
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, tubular, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits

			Terminal
Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1323	D	Microscopic	
		liver	- infiltration, mononuclear cell, minimal
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, minimal
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	- within normal limits
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1323	D	Microscopic	
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1323	D	Microscopic	
		vagina	- within normal limits
		Cause of Death	- undetermined
1333	S	Macroscopic	
		ovaries	- cyst, clear, right, mild
		pituitary gland	- enlarged, red, severe
		uterus with cervix	- enlarged, horn, mild
1333	S	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), mild
		esophagus	- within normal limits
		. 0	

S - Scheduled necropsy D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1333	S	Microscopic	
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- within normal limits
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- within normal limits
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		•	

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1333	S	Microscopic	
		mammary gland	<ul> <li>fibroadenoma, benign, primary, incidental, not cause of death slide 18.</li> </ul>
			- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- hyperplasia, sex-cord/stromal, unilateral, mild
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	<ul> <li>within normal limits         one of pair present</li> </ul>
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1333	S	Microscopic	
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	<ul> <li>adenoma, c-cell, benign, unilateral, primary, incidental, not cause of death</li> </ul>
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1333	S	Microscopic	
		urinary bladder	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, moderate
			corresponds to macroscopic observation (uterus with cervix - enlarged)
		vagina	- within normal limits
		non-correlated macro observation	- ovaries - cyst
1334	E	Macroscopic	
		adrenal glands	- enlarged, right, mild
		lymph node, axillary	- within normal limits
			draining node for mass a and mass b, left. draining node for mass e, right.
		lymph node, inguinal	- within normal limits
		- · · · · · · · · · · · · · · · · · · ·	draining node for mass c, left. draining node for mass d, right.
		pituitary gland	- enlarged, red, moderate

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1334	E	Macroscopic	
		skin, subcutis	- mass, tan, mass a, left axillary area, present
			corresponds to antemortem observation (mass 1)
			approximately 4.5 cm in diameter.
			- mass, tan, mass b, left axillary area, present
			corresponds to antemortem observation (mass 2)
			approximately 2.5 cm in diameter.
			<ul> <li>mass, tan, mass c, left anogenital region, present</li> </ul>
			corresponds to antemortem observation (mass 3)
			approximately 4.7 cm in diameter.
			<ul> <li>mass, tan, mass d, right anogenital region, present</li> </ul>
			corresponds to antemortem observation (mass 4)
			approximately 4.0 cm in diameter.
			- mass, tan, mass e, right axillary area, present
			corresponds to antemortem observation (mass 5)
			approximately 1.9 cm in diameter.
1334	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
			corresponds to macroscopic observation (adrenal glands - enlarged)
			<ul> <li>hyperplasia, focal cortical, unilateral, mild</li> </ul>

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1334	E	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), mild
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			<ul> <li>nephropathy, chronic progressive, bilateral, minimal</li> </ul>
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1334	E	Microscopic large intestine, rectum larynx liver	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>focus of cellular alteration, basophilic, minimal</li> <li>hyperplasia, bile duct, minimal</li> <li>vacuolation, periportal, mild</li> </ul>
		lung lymph node, axillary lymph node, inguinal lymph node, mandibular lymph node, mesenteric	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>erythrocytosis/erythrophagocytosis, sinus, minimal</li> <li>within normal limits</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1334	Е	Microscopic	
		mammary gland	<ul> <li>fibroadenoma, benign, multiple, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b; skin, subcutis - mass c; skin, subcutis - mass d; skin, subcutis - mass e)</li> <li>hyperplasia, lobular, mild</li> </ul>
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1334	E	Microscopic	
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- degeneration/necrosis, myofiber, minimal
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1334	E	Microscopic urinary bladder uterus with cervix vagina Cause of Death	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>pituitary tumor</li> </ul>
1335	S	Macroscopic liver lymph node, inguinal lymph node, mesenteric pancreas	<ul> <li>cyst, clear, left lateral lobe, moderate</li> <li>not identified, bilateral, no grade draining node for mass a, right and mass b, left.</li> <li>within normal limits draining node for mass c.</li> <li>mass, tan, mass c, present approximately 1.0 cm in diameter.</li> </ul>

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1335	S	Macroscopic	
		skin, subcutis	- mass, tan, mass a, right anogenital region, present
			corresponds to antemortem observation (hair sparse mass 1)
			approximately 9.0 x 8.0 x 3.2 cm.
			- mass, tan, mass b, left inguinal area, present
			corresponds to antemortem observation (mass 2)
	_		approximately 4.0 x 4.0 x 3.5 cm.
1335	S	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- hyperplasia, granulocytic, mild
		bone marrow, sternum	<ul> <li>hyperplasia, granulocytic, minimal</li> <li>within normal limits</li> </ul>
		bone, femur bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1335	S	Microscopic	
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, unilateral, minimal
			- pyelitis, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- cyst, biliary, simple, mild
			corresponds to macroscopic observation (liver - cyst)
			- focus of cellular alteration, basophilic, minimal
			- hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, minimal
		lung	- histiocytosis, alveolar, minimal
		-	- macrophages, pigmented alveolar, minimal

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1335	S	Microscopic	
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- fibroadenoma, benign, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)
			- hyperplasia, lobular, mild
		nerve, sciatic	<ul> <li>degeneration, axonal/myelin, minimal</li> </ul>
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	<ul> <li>hyperplasia, sex-cord/stromal, unilateral, mild</li> </ul>
		oviducts	- within normal limits
		pancreas	- atrophy, acinar, minimal
			<ul> <li>carcinoma, islet cell, malignant, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pancreas - mass c)
		parathyroid glands	- within normal limits
			one of pair present

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1335	S	Microscopic	
		pharynx	- within normal limits
		pituitary gland	- hyperplasia, focal, pars distalis, mild
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		-	- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1335	S	Microscopic tongue trachea ureters urinary bladder uterus with cervix vagina	<ul> <li>within normal limits</li> </ul>
1336	E	Macroscopic lymph node, axillary lymph node, inguinal pituitary gland	<ul> <li>within normal limits</li> <li>draining node for mass b, left and mass d, right.</li> <li>not identified, bilateral, no grade</li> <li>draining node for mass a, right and mass c, left.</li> <li>enlarged, red, severe</li> </ul>

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1336	E	Macroscopic	
		skin, subcutis	- mass, tan, mass a, right anogenital region, present
			corresponds to antemortem observation (hair sparse mass 1)
			approximately 10.0 x 5.5 x 3.5 cm.
			- mass, tan, mass b, left axillary area, present
			corresponds to antemortem observation (mass 2)
			approximately 6.5 x 5.0 x 3.0 cm.
			<ul> <li>mass, tan, mass c, right inguinal area, present corresponds to antemortem observation (mass 3)</li> </ul>
			approximately 3.0 cm in diameter.
			- mass, tan, mass d, right axillary area, present
			approximately 1.0 cm in diameter.
		thymus	- small, severe
1336	Е	Microscopic	,
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1336	E	Microscopic	
		bone, sternum	- within normal limits
		brain	- carcinoma, pars distalis, malignant, secondary
			- compression, ventral (pituitary tumor), moderate
			- hemorrhage, moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	<ul> <li>mineralization, pelvic, unilateral, minimal</li> </ul>
			<ul> <li>nephropathy, chronic progressive, unilateral, minimal</li> </ul>
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1336	Е	Microscopic	
		liver	- focus of cellular alteration, basophilic, minimal
			- hyperplasia, bile duct, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, axillary	- within normal limits
		lymph node, mandibular	- erythrocytosis/erythrophagocytosis, sinus, minimal
		lymph node, mesenteric	- within normal limits
		mammary gland	<ul> <li>adenocarcinoma, malignant, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (skin, subcutis - mass d)
			<ul> <li>adenoma, benign, primary, incidental, not cause of death slide 18.</li> </ul>
			<ul> <li>fibroadenoma, benign, multiple, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b; skin, subcutis - mass c)</li> </ul>
			- hyperplasia, lobular, moderate
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- degeneration, mild
			squamous epithelium, oral mucosa.

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1336	Е	Microscopic	
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, minimal
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>carcinoma, pars distalis, malignant, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
<u>0 mg/kg/day</u> 1336	E	Microscopic spinal cord, cervical spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus  thyroid gland tongue trachea ureters urinary bladder uterus with cervix	<ul> <li>within normal limits</li> <li>depletion, lymphoid, generalized, moderate corresponds to macroscopic observation (thymus - small)</li> <li>hyperplasia, epithelial cell, minimal</li> <li>hyperplasia, c-cell, focal, unilateral, minimal</li> <li>within normal limits</li> </ul>
		vagina Cause of Death	<ul><li>within normal limits</li><li>pituitary tumor</li></ul>

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1337	Е	Macroscopic	
		animal/whole body	<ul> <li>body fat depleted, mild corresponds to antemortem observation (thin)</li> </ul>
		liver	- discoloration, tan, multiple lobes, mild
		lung with bronchi	<ul> <li>mass, tan, multiple, multiple lobes, mass b, present ranging in size from approximately 0.2 to 2.0 cm in diameter.</li> </ul>
		lymph node, mandibular	<ul> <li>discoloration, red, bilateral, mild draining node for mass a.</li> </ul>
		lymph node, mediastinal	<ul> <li>not identified, no grade draining node for mass b.</li> </ul>
		skin, subcutis	<ul> <li>mass, tan, mass a, ventral neck, present corresponds to antemortem observation (mass 1) approximately 12.0 cm in diameter.</li> </ul>
1337	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1337	Е	Microscopic	
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
			- mineralization, tubular, bilateral, minimal
			- nephropathy, chronic progressive, bilateral, mild
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
) mg/kg/day			
1337	E	Microscopic	
		liver	<ul> <li>vacuolation, periportal, mild</li> </ul>
			corresponds to macroscopic observation (liver - discoloration, tan)
		lung	- adenocarcinoma, malignant, secondary
			corresponds to macroscopic observation (lung with bronchi - mass b)
		lymph node, mandibular	- erythrocytosis/erythrophagocytosis, sinus, mild
			corresponds to macroscopic observation (lymph node, mandibular - discoloration, red)
		lymph node, mesenteric	- within normal limits
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits

E - Euthanized in extremis

		10	Sittima
Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1337	Е	Microscopic	
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	- within normal limits
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits

E - Euthanized in extremis

thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina	depletion, lymphoid, generalized, severe within normal limits mammary tumor
, , , , , , , , ,	within normal limits draining node for mass a, left, and mass b, right. enlarged, tan, moderate
	uterus with cervix vagina Cause of Death  Macroscopic lymph node, axillary

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1338	Е	Macroscopic	
		skin, subcutis	- mass, tan, mass a, left axillary area, present
			corresponds to antemortem observation (mass 1)
			approximately 3.0 x 2.5 x 1.5 cm.
			<ul> <li>mass, ulcerated, mass b, right axillary area, present</li> </ul>
			corresponds to antemortem observation (mass 2)
			approximately 2.5 x 2.0 x 1.5 cm, tan, possible cannibalism.
1338	E	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), mild
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
			one of pair present

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1338	E	Microscopic	
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			- focus of cellular alteration, clear, minimal
			- hematopoiesis, extramedullary, minimal
			- infiltration, mononuclear cell, minimal
			- necrosis, focal, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, axillary	- within normal limits
		lymph node, mandibular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1338	E	Microscopic	
		lymph node, mesenteric	- within normal limits
		mammary gland	<ul> <li>adenocarcinoma, malignant, multiple, primary, mortality-independent</li> </ul>
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)
			- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1338	E	Microscopic	
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, mild
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1338	E	Microscopic uterus with cervix vagina Cause of Death	<ul><li>within normal limits</li><li>within normal limits</li><li>mammary tumor</li></ul>
1339	S	Macroscopic lymph node, axillary lymph node, inguinal	<ul> <li>within normal limits</li> <li>right is draining node for mass b.</li> <li>not identified, left, no grade</li> </ul>
		pituitary gland skin, subcutis	draining node for mass a.  - enlarged, red, severe  - mass, tan, mass a, left anogenital region, present corresponds to antemortem observation (mass 1) approximately 8.0 x 5.0 x 2.3 cm.  - mass, tan, mass b, right axillary area, present corresponds to antemortem observation (swelling mass 2) approximately 2.0 x 2.0 x 0.8 cm.
1339	S	uterus with cervix  Microscopic  adrenal glands	- cyst, clear, horn, mild  - angiectasis/cystic degeneration, focal cortical, bilateral, mild

S - Scheduled necropsy E - Euthanized *in extremis* 

Fate	Tissue	Observations
S	Microscopic	
	aorta	- within normal limits
	bone marrow, femur	- within normal limits
	bone marrow, sternum	- within normal limits
	bone, femur	- within normal limits
	bone, sternum	- within normal limits
	brain	- carcinoma, pars distalis, malignant, secondary
		- compression, ventral (pituitary tumor), mild
	esophagus	- within normal limits
	eyes	- within normal limits
	eyes, optic nerves	- within normal limits
	eyes, retina	- within normal limits
	galt	- within normal limits
	harderian glands	- within normal limits
	heart	- cardiomyopathy, minimal
	joint, tibiofemoral	- within normal limits
	kidneys	- mineralization, pelvic, bilateral, minimal
	•	- mineralization, tubular, unilateral, minimal
		- nephropathy, chronic progressive, bilateral, minimal
	lacrimal glands, exorbital	- within normal limits
		S Microscopic aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum brain  esophagus eyes eyes, optic nerves eyes, retina galt harderian glands heart joint, tibiofemoral kidneys

Group, Animal Number	Fate	Tissue	Observations
) mg/kg/day			
1339	S	Microscopic	
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	<ul> <li>focus of cellular alteration, basophilic, minimal</li> </ul>
		lung	- within normal limits
		lymph node, axillary	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	<ul> <li>fibroadenoma, benign, multiple, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)</li> <li>hyperplasia, lobular, minimal</li> </ul>
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1339	S	Microscopic	
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>carcinoma, pars distalis, malignant, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits

Fate	Tissue	Observations
S	Microscopic	
	spleen	<ul> <li>hematopoiesis, extramedullary, increased, minimal</li> </ul>
	stomach, glandular	- within normal limits
	stomach, nonglandular	- within normal limits
	thymus	<ul> <li>depletion, lymphoid, generalized, moderate</li> </ul>
		- hyperplasia, epithelial cell, minimal
	thyroid gland	- within normal limits
	tongue	- within normal limits
	trachea	- within normal limits
	ureters	- within normal limits
	urinary bladder	- within normal limits
	uterus with cervix	- dilatation, gland/lumen, mild
		corresponds to macroscopic observation (uterus with cervix - cyst)
	vagina	- within normal limits
Е	Macroscopic	
		- within normal limits
	,	draining node for mass a, right.
	S	S Microscopic spleen stomach, glandular stomach, nonglandular thymus  thyroid gland tongue trachea ureters urinary bladder uterus with cervix

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1340	Е	Macroscopic	- swollen/thickened, tan, generalized, moderate
		mammary gland	corresponds to antemortem observation (swelling)
		pituitary gland	- enlarged, red, moderate
		skin, subcutis	- mass, tan, mass a, right anogenital region, present
			corresponds to antemortem observation (swelling mass 1)
			approximately 3.0 cm in diameter.
1340	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, mild</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	<ul> <li>compression, ventral (pituitary tumor), moderate</li> </ul>
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1340	E	Microscopic	
		galt	- within normal limits
		harderian glands	- hyperplasia, focal, unilateral, minimal
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- edema, papilla, unilateral, minimal
			- nephropathy, chronic progressive, bilateral, mild
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			- focus of cellular alteration, eosinophilic, mild
			- hyperplasia, bile duct, minimal
			- vacuolation, periportal, mild
		lung	- histiocytosis, alveolar, minimal
		lymph node, inguinal	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1340	Е	Microscopic	
		mammary gland	- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, moderate
			corresponds to macroscopic observation (mammary gland - swollen/thickened)
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, minimal
		oviducts	- within normal limits
		pancreas	- atrophy, acinar, minimal
		parathyroid glands	- hyperplasia, focal, bilateral, minimal
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1340	E	Microscopic	
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- hyperplasia, epithelial, nonglandular, moderate
			- inflammation, mild
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1340	E	Microscopic urinary bladder uterus with cervix vagina Cause of Death	<ul><li>within normal limits</li><li>within normal limits</li><li>within normal limits</li><li>pituitary tumor</li></ul>
1341	E	Macroscopic lymph node, axillary pituitary gland skin, subcutis	<ul> <li>within normal limits draining node for mass a, right.</li> <li>enlarged, mild</li> <li>mass, tan, mass a, right lateral thorax, present corresponds to antemortem observation (mass 1 scabbed area) approximately 3.0 cm in diameter. ulcerated.</li> </ul>
1341	E	Microscopic adrenal glands aorta bone marrow, femur bone marrow, sternum	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>hyperplasia, mixed, mild</li> <li>within normal limits</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1341	Е	Microscopic	
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
			- mineralization, tubular, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hematopoiesis, extramedullary, minimal

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1341	E	Microscopic	
		lung	- within normal limits
		lymph node, axillary	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, minimal
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	- hyperplasia, diffuse, pars distalis, mild
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
0 mg/kg/day 1341	E	Microscopic salivary gland, parotid salivary gland, sublingual skeletal muscle, biceps femoris skin small intestine, duodenum small intestine, ileum small intestine, jejunum spinal cord, cervical spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus thyroid gland tongue trachea ureters	<ul> <li>within normal limits</li> <li>hematopoiesis, extramedullary, increased, mild</li> <li>within normal limits</li> <li>within normal limits</li> <li>depletion, lymphoid, generalized, moderate</li> <li>within normal limits</li> </ul>
		tongue trachea	<ul><li>within normal limits</li><li>within normal limits</li></ul>

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1341	E	Microscopic urinary bladder uterus with cervix vagina Cause of Death	<ul><li>within normal limits</li><li>within normal limits</li><li>within normal limits</li><li>mammary tumor</li></ul>
1342	E	Macroscopic lymph node, axillary skin, subcutis	<ul> <li>within normal limits</li> <li>draining node for mass a, right.</li> <li>mass, tan, mass a, right axillary area, present</li> <li>corresponds to antemortem observation (mass 1)</li> <li>approximately 10.0 x 10.0 x 7.0 cm.</li> </ul>
1342	E	Microscopic adrenal glands aorta bone marrow, femur bone marrow, sternum	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1342	E	Microscopic	
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, minimal

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1342	Е	Microscopic	
		lung	- within normal limits
		lymph node, axillary	- erythrocytosis/erythrophagocytosis, sinus, minimal
			- histiocytosis, sinus, mild
		lymph node, mandibular	- erythrocytosis/erythrophagocytosis, sinus, minimal
		lymph node, mesenteric	- within normal limits
		mammary gland	- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1342	Е	Microscopic	
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1342	E	Microscopic	
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- mammary tumor
1343	E	Macroscopic	
		pituitary gland	- enlarged, red, severe
1343	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), severe

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1343	E	Microscopic	
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, tubular, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hyperplasia, bile duct, minimal
			- infiltration, mononuclear cell, minimal
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits

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E - Euthanized in extremis

Group,	Fata	<b>T</b>	Observations
Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1343	E	Microscopic	
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- inflammation, subacute/chronic, minimal
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1344	Е	Macroscopic	
		animal/whole body	- body fat depleted, mild
			corresponds to antemortem observation (thin)
		lymph node, axillary	- within normal limits
			draining node for mass a, right.
		skin, subcutis	- mass, tan, mass a, right lateral thorax, present
			corresponds to antemortem observation (mass 1)
			approximately 9.0 cm in diameter. wraps around to right axillary area.
1344	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1344	Е	Microscopic	
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- not examined
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, tubular, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- necrosis, hepatocytes, centrilobular, minimal
			- vacuolation, centrilobular, minimal
		lung	- within normal limits
		lymph node, axillary	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1344	Е	Microscopic	
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
) mg/kg/day			
1344	Е	Microscopic	
		skin, subcutis	- fibroma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- not examined
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits

			Tomma
Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1344	E	Microscopic	
		Cause of Death	- fibrosarcoma/fibroma
1345	E	Macroscopic	
		lymph node, axillary	- within normal limits
			draining node for mass b, right.
		lymph node, inguinal	- within normal limits
			draining node for mass a, left.
		mammary gland	- swollen/thickened, generalized, mild
		ovaries	- cyst, clear, right, mild
		pituitary gland	- enlarged, red, severe
		skin, subcutis	- mass, tan, mass a, left inguinal area, present
			corresponds to antemortem observation (swelling)
			approximately 2.0 x 2.0 x 1.0 cm.
			- mass, tan, mass b, right axillary area, present
			corresponds to antemortem observation (swelling)
			approximately 2.0 x 1.0 x 0.5 cm.
1345	Е	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1345	E	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- carcinoma, pars distalis, malignant, secondary
			<ul> <li>compression, ventral (pituitary tumor), moderate</li> </ul>
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, bilateral, minimal
			- nephropathy, chronic progressive, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1345	Е	Microscopic	
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- infiltration, mononuclear cell, minimal
			<ul> <li>vacuolation, periportal, mild</li> </ul>
		lung	- within normal limits
		lymph node, axillary	- within normal limits
		lymph node, inguinal	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	<ul> <li>adenocarcinoma, malignant, primary, mortality-independent</li> </ul>
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass b)
			- hyperplasia, lobular, moderate
			corresponds to macroscopic observation (mammary gland - swollen/thickened)
		nerve, sciatic	- within normal limits

# Individual Animal Listing - FEMALE Terminal

Group, Observations Animal Number Fate Tissue 0 mg/kg/day 1345 Ε **Microscopic** nose, level a - within normal limits - within normal limits nose, level b nose, level c - within normal limits - within normal limits nose, level d ovaries - cyst, unilateral, minimal corresponds to macroscopic observation (ovaries - cyst) oviducts - within normal limits - within normal limits pancreas parathyroid glands - not examined pharynx - within normal limits - carcinoma, pars distalis, malignant, primary, fatal, positive pituitary gland cause of death corresponds to macroscopic observation (pituitary gland enlarged) salivary gland, mandibular - within normal limits salivary gland, parotid - within normal limits salivary gland, sublingual - within normal limits skeletal muscle, biceps femoris - within normal limits skin - within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1345	Е	Microscopic	
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- erosion/ulcer, minimal
			- inflammation, minimal
		thymus	- depletion, lymphoid, generalized, moderate
		•	- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		•	

Group, Animal Number	Fate	Tissue	Observations	
0 mg/kg/day				
1345	E	Microscopic Cause of Death	- pituitary tumor	
1346	Е	<b>Macroscopic</b> lymph node, axillary	<ul> <li>not identified, left, no grade draining node for mass a.</li> </ul>	
		pituitary gland	- enlarged, red, mild	
		skin, subcutis	<ul> <li>mass, tan, mass a, left axillary area, present corresponds to antemortem observation (mass 1) approximately 12.5 x 6.5 x 5.0 cm.</li> </ul>	
1346	E	Microscopic		
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>	
			<ul> <li>vacuolation, focal, unilateral, mild</li> </ul>	
		aorta	- within normal limits	
		bone marrow, femur	- within normal limits	
		bone marrow, sternum	- within normal limits	
		bone, femur	- within normal limits	

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1346	E	Microscopic	
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- nephropathy, chronic progressive, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- vacuolation, periportal, minimal
		lung	- histiocytosis, alveolar, minimal

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1346	E	Microscopic	
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1346	Е	Microscopic	
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1346	E	Microscopic	
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- mammary tumor
1347	S	Macroscopic	
		lymph node, mesenteric	- enlarged, moderate
1347	S	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- hyperplasia, granulocytic, mild
		bone marrow, sternum	- hyperplasia, granulocytic, mild
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		•	

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1347	S	Microscopic	
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- nephropathy, chronic progressive, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- polyarteritis, minimal
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, mild
			- focus of cellular alteration, eosinophilic, minimal
			- hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, minimal
			- vacuolation, median cleft, mild
		lung	- within normal limits
		- 5	

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1347	S	Microscopic	
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- dilatation, sinus, moderate
			corresponds to macroscopic observation (lymph node, mesenteric - enlarged)
		mammary gland	<ul> <li>adenocarcinoma, malignant, primary, incidental, not cause of death</li> </ul>
			slide 18.
			- hyperplasia, lobular, mild
		nerve, sciatic	<ul> <li>degeneration, axonal/myelin, minimal</li> </ul>
		nose, level a	- within normal limits
		nose, level b	- exudate, nasal passage, minimal
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- hyperplasia, sex-cord/stromal, unilateral, minimal
		oviducts	- within normal limits
		pancreas	- atrophy, acinar, minimal
		·	- polyarteritis, moderate
		parathyroid glands	- not examined
		pharynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1347	S	Microscopic	
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1347	S	Microscopic tongue trachea ureters urinary bladder uterus with cervix vagina	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>hyperplasia, squamous cell, mild</li> <li>within normal limits</li> </ul>
1348	D	Macroscopic adrenal glands cavity, thoracic lymph node, mediastinal pituitary gland thymus	<ul> <li>enlarged, left, mild</li> <li>mass, tan, mass a, present approximately 4.0 cm in diameter.</li> <li>within normal limits draining node for mass a.</li> <li>enlarged, red, mild</li> <li>not identified, no grade thymus most likely within mass a.</li> </ul>

S - Scheduled necropsy D - Died on Study

			Terrimia
Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1348	D	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, unilateral, moderate</li> </ul>
			corresponds to macroscopic observation (adrenal glands - enlarged)
		aorta	- within normal limits
		bone marrow, femur	- hyperplasia, granulocytic, mild
		bone marrow, sternum	- hyperplasia, granulocytic, mild
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- not examined
			autolysis too severe for diagnosis
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1348	D	Microscopic	
		kidneys	- mineralization, pelvic, bilateral, minimal
			- pyelitis, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, mandibular	- within normal limits
		lymph node, mediastinal	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1348	D	Microscopic	
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	- hyperplasia, diffuse, pars distalis, mild
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1348	D	Microscopic spleen stomach, glandular	- within normal limits - within normal limits
		stomach, nonglandular thymus	<ul> <li>within normal limits</li> <li>thymoma, malignant, primary, fatal, positive cause of death corresponds to macroscopic observation (cavity, thoracic - mass a)</li> </ul>
		thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	<ul> <li>within normal limits</li> <li>thymus tumor</li> </ul>
1349	E	Macroscopic lymph node, axillary	- within normal limits draining node for mass a, left.

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1349	E	Macroscopic pituitary gland skin, subcutis	<ul> <li>enlarged, red, severe</li> <li>mass, tan, mass a, left axillary area, present corresponds to antemortem observation (swelling) approximately 1.0 x 1.0 x 0.5 cm.</li> </ul>
1349	E	Microscopic adrenal glands aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum brain esophagus eyes eyes, optic nerves eyes, retina galt harderian glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, mild</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>compression, ventral (pituitary tumor), moderate</li> <li>within normal limits</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1349	E	Microscopic	
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- hyperplasia, transitional cell, bilateral, minimal
			- pyelitis, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			- focus of cellular alteration, eosinophilic, minimal
			- vacuolation, periportal, minimal
		lung	- within normal limits
		lymph node, axillary	- within normal limits
		lymph node, mandibular	- erythrocytosis/erythrophagocytosis, sinus, minimal
		lymph node, mesenteric	- within normal limits
		mammary gland	- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			<ul> <li>hyperplasia, lobular, moderate</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1349	E	Microscopic	
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1349	Е	Microscopic	
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor

			Tomma
Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1350	D	Macroscopic	
		all tissues	- within normal limits
1350	D	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- not examined
			autolysis too severe for diagnosis
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		•	

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1350	D	Microscopic	
		kidneys	- mineralization, pelvic, bilateral, minimal
		•	- mineralization, tubular, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
		lung	- bacterial colonies, minimal
			large amount of section has lysed red blood cells indicative of dosing injury.
			- histiocytosis, alveolar, minimal
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- within normal limits
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1350	D	Microscopic	
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1350	D	Microscopic	
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	<ul> <li>adenoma, c-cell, benign, unilateral, primary, incidental, not cause of death</li> </ul>
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- dosing injury
1351	D	Macroscopic	
		eyes	- absent/cannibalized, bilateral, no grade
		·	corresponds to antemortem observation (cannibalized/partially cannibalized)
		eyes, optic nerves	- absent/cannibalized, bilateral, no grade

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1351	D	Macroscopic	
		eyes, retina	<ul> <li>absent/cannibalized, bilateral, no grade</li> </ul>
		harderian glands	<ul> <li>absent/cannibalized, bilateral, no grade</li> </ul>
		lacrimal glands, exorbital	- absent/cannibalized, bilateral, no grade
		lymph node, axillary	- within normal limits
			draining node for mass a, left. draining node for mass b, right.
		lymph node, mandibular	- absent/cannibalized, bilateral, no grade
		parathyroid glands	- absent/cannibalized, bilateral, no grade
		pituitary gland	- enlarged, red, severe
		salivary gland, mandibular	- absent/cannibalized, bilateral, no grade
		salivary gland, parotid	- absent/cannibalized, bilateral, no grade
		salivary gland, sublingual	- absent/cannibalized, bilateral, no grade
		skin, subcutis	- mass, tan, mass b, right axillary area, present
			corresponds to antemortem observation (mass 2)
			approximately 4.0 cm in diameter.
			- mass, ulcerated, mass a, left axillary area, present
			corresponds to antemortem observation (mass 1 hair sparse)
			approximately 9.0 x 6.0 x 5.0 cm, tan.
		thyroid gland	- absent/cannibalized, bilateral, no grade

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1351	D	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), mild
		esophagus	- within normal limits
		eyes	- not examined
			cannibalized
		eyes, optic nerves	- not examined
			cannibalized
		eyes, retina	- not examined
			cannibalized
		galt	- within normal limits
		harderian glands	- not examined
			cannibalized
		heart	- cardiomyopathy, minimal

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1351	D	Microscopic	
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, bilateral, minimal
		lacrimal glands, exorbital	- not examined
			cannibalized
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- not examined
		liver	- within normal limits
		lung	- within normal limits
		lymph node, axillary	- within normal limits
		lymph node, mandibular	- not examined
		•	cannibalized
		lymph node, mesenteric	- within normal limits
		• •	

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1351	D	Microscopic	
		mammary gland	<ul> <li>fibroadenoma, benign, multiple, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)</li> <li>hyperplasia, lobular, mild</li> </ul>
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	<ul> <li>not examined cannibalized</li> </ul>
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	<ul> <li>not examined cannibalized</li> </ul>

-		16	erminai
Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1351	D	Microscopic	
		salivary gland, parotid	- not examined
			cannibalized
		salivary gland, sublingual	- not examined
			cannibalized
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe
		thyroid gland	- not examined
			cannibalized
		tongue	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1351	D	Microscopic trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1352	S	Macroscopic	
		lymph node, inguinal	- not identified, bilateral, no grade
			draining node for mass b, left. draining node for mass c, right.
		lymph node, mandibular	- within normal limits
			draining node for mass a, right.
		mammary gland	- swollen/thickened, tan, moderate
			most affected areas are left inguinal region, right inguinal region and anogenital region.
		ovaries	- cyst, clear, left, mild

S - Scheduled necropsy D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1352	S	Macroscopic	
		skin, subcutis	- mass, tan, mass a, cervical, present
			corresponds to antemortem observation (mass 1)
			approximately 2.0 x 4.5 x 5.0 cm.
			<ul> <li>mass, tan, mass b, left anogenital region, present</li> </ul>
			corresponds to antemortem observation (nodule)
			approximately 1.0 x 1.5 x 2.0 cm.
			<ul> <li>mass, tan, mass c, right inguinal area, present</li> </ul>
			corresponds to antemortem observation (nodule)
			approximately 0.5 x 1.5 x 2.0 cm.
1352	S	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
			<ul> <li>hyperplasia, focal medullary, unilateral, minimal</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	<ul> <li>hyperplasia, granulocytic, mild</li> </ul>
		bone marrow, sternum	<ul> <li>hyperplasia, granulocytic, minimal</li> </ul>
		bone, femur	- within normal limits
		bone, sternum	- within normal limits

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1352	S	Microscopic	
		brain .	- lymphoma, malignant, multicentric, incidental, not cause of death
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- lymphoma, malignant, multicentric, incidental, not cause of death
		harderian glands	<ul> <li>lymphoma, malignant, bilateral, multicentric, incidental, not cause of death</li> </ul>
		heart	- cardiomyopathy, mild
			- lymphoma, malignant, multicentric, incidental, not cause of death
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, bilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	<ul> <li>lymphoma, malignant, bilateral, multicentric, incidental, not cause of death</li> </ul>
		large intestine, cecum	- polyarteritis, minimal
		large intestine, colon	- lymphoma, malignant, multicentric, incidental, not cause of death
		large intestine, rectum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1352	S	Microscopic	
		larynx	- lymphoma, malignant, multicentric, incidental, not cause of death
		liver	- focus of cellular alteration, basophilic, minimal
			- lymphoma, malignant, multicentric, incidental, not cause of death
			- necrosis, focal, minimal
			<ul> <li>vacuolation, centrilobular, minimal</li> </ul>
		lung	- histiocytosis, alveolar, minimal
			- lymphoma, malignant, multicentric, incidental, not cause of death
		lymph node, inguinal	- lymphoma, malignant, multicentric, incidental, not cause of death
			slide 26-3 and 26-3 r-1.
		lymph node, mandibular	<ul> <li>hyperplasia, lymphocyte/plasmacyte, medulla, mild</li> </ul>
			- lymphoma, malignant, multicentric, incidental, not cause of death
		lymph node, mesenteric	- lymphoma, malignant, multicentric, incidental, not cause of death

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1352	S	Microscopic	
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass b)
			- fibroadenoma, benign, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass c)
			- hyperplasia, lobular, moderate
			corresponds to macroscopic observation (mammary gland - swollen/thickened)
		multicentric neoplasm	- lymphoma, malignant, multicentric, incidental, not cause of death
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- lymphoma, malignant, multicentric, incidental, not cause of death
		nose, level b	- lymphoma, malignant, multicentric, incidental, not cause of death
		nose, level c	- lymphoma, malignant, multicentric, incidental, not cause of death
		nose, level d	- lymphoma, malignant, multicentric, incidental, not cause of death
		ovaries	- cyst, unilateral, mild
			corresponds to macroscopic observation (ovaries - cyst)
			- hyperplasia, sex-cord/stromal, unilateral, minimal
		oviducts	- within normal limits

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1352	S	Microscopic	
		pancreas	- hyperplasia, islet cell, mild
			- lymphoma, malignant, multicentric, incidental, not cause of death
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
		salivary gland, mandibular	- lymphoma, malignant, multicentric, incidental, not cause of death
		salivary gland, parotid	- lymphoma, malignant, multicentric, incidental, not cause of death
		salivary gland, sublingual	- lymphoma, malignant, multicentric, incidental, not cause of death
		skeletal muscle, biceps femoris	- lymphoma, malignant, multicentric, incidental, not cause of death
		skin	- within normal limits
		skin, subcutis	- lymphoma, malignant, multicentric, incidental, not cause of death
			slide 8, 18, 18-1, 26-1, 26-2, 26-3, and 26-3 r-1.
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1352	S	Microscopic	
		spinal cord, thoracic	- within normal limits
		spleen	- lymphoma, malignant, multicentric, incidental, not cause of death
		stomach, glandular	- within normal limits
		stomach, nonglandular	- lymphoma, malignant, multicentric, incidental, not cause of death
		thymus	- depletion, lymphoid, generalized, severe
			- hyperplasia, epithelial cell, mild
		thyroid gland	<ul> <li>lymphoma, malignant, bilateral, multicentric, incidental, not cause of death</li> </ul>
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	<ul> <li>lymphoma, malignant, unilateral, multicentric, incidental, not cause of death</li> </ul>
		urinary bladder	- lymphoma, malignant, multicentric, incidental, not cause of death
		uterus with cervix	- dilatation, gland/lumen, mild
			- lymphoma, malignant, multicentric, incidental, not cause of death
		vagina	- within normal limits
1353	S	Macroscopic	
		adrenal glands	- enlarged, tan, right, mild

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1353	S	Macroscopic	
		lymph node, axillary	- within normal limits
			draining node for mass d, left.
		lymph node, iliac	- within normal limits
			draining node for mass c, right.
		lymph node, inguinal	<ul> <li>not identified, right, no grade</li> </ul>
			draining node for mass a and mass b.
		pituitary gland	- enlarged, tan, mild
		skin, subcutis	<ul> <li>mass, black, mass c, right anogenital region, present</li> </ul>
			approximately 5.5 x 3.5 x 2.0 cm.
			- mass, tan, mass a, right inguinal area, present
			corresponds to antemortem observation (mass 1)
			approximately 6.0 x 4.0 x 3.5 cm.
			- mass, tan, mass b, right inguinal area, present
			corresponds to antemortem observation (mass 2)
			approximately 2.5 x 2.5 x 2.0 cm.
			<ul> <li>mass, tan, mass d, left axillary area, present</li> </ul>
			corresponds to antemortem observation (swelling)
			approximately 2.5 x 1.5 x 1.5 cm.

### Individual Animal Listing - FEMALE Terminal

Group, Observations Animal Number Fate Tissue 0 mg/kg/day 1353 S **Microscopic** adrenal glands - angiectasis/cystic degeneration, focal cortical, bilateral, moderate corresponds to macroscopic observation (adrenal glands enlarged) one medulla present - within normal limits aorta bone marrow, femur - within normal limits bone marrow, sternum - within normal limits - within normal limits bone, femur bone, sternum - within normal limits brain - within normal limits - within normal limits esophagus eyes - within normal limits - within normal limits eyes, optic nerves eyes, retina - within normal limits galt - within normal limits harderian glands - within normal limits

- cardiomyopathy, minimal

- within normal limits

heart

joint, tibiofemoral

S - Scheduled necropsy

Fate	Tissue	Observations
S	Microscopic	
	kidneys	- mineralization, pelvic, bilateral, mild
		- mineralization, tubular, unilateral, minimal
	lacrimal glands, exorbital	- within normal limits
	large intestine, cecum	- within normal limits
	large intestine, colon	- within normal limits
	large intestine, rectum	- within normal limits
	larynx	- within normal limits
	liver	- focus of cellular alteration, basophilic, minimal
		- focus of cellular alteration, eosinophilic, minimal
	lung	- within normal limits
	lymph node, axillary	- within normal limits
	lymph node, iliac	- within normal limits
	•	- within normal limits
		- within normal limits
	S	kidneys  lacrimal glands, exorbital large intestine, cecum large intestine, colon large intestine, rectum larynx liver  lung

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1353	S	Microscopic	
		mammary gland	<ul> <li>adenocarcinoma, malignant, multiple, primary, mortality-independent</li> <li>corresponds to macroscopic observation (skin, subcutis - mass b; skin, subcutis - mass c; skin, subcutis - mass d)</li> <li>fibroadenoma, benign, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a)</li> <li>hyperplasia, lobular, mild</li> </ul>
		nerve, sciatic	<ul> <li>degeneration, axonal/myelin, minimal</li> </ul>
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, minimal
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1353	S	Microscopic	
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death corresponds to macroscopic observation (pituitary gland -</li> </ul>
			enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- degeneration/necrosis, myofiber, minimal
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1353	S	Microscopic	
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, mild
		thyroid gland	- hyperplasia, c-cell, focal, unilateral, mild
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, mild
		vagina	- within normal limits
1354	E	Macroscopic	
		pituitary gland	- enlarged, moderate
1354	E	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
			- hyperplasia, focal cortical, unilateral, minimal
		aorta	- within normal limits
		bone marrow, femur	- within normal limits

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1354	E	Microscopic	
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), severe
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
		•	- mineralization, tubular, unilateral, minimal
			- nephropathy, chronic progressive, bilateral, mild
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1354	Е	Microscopic	
		larynx	- within normal limits
		liver	- fibrosis, minimal
			- macrophages, pigmented, minimal
			- vacuolation, periportal, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	<ul> <li>adenocarcinoma, malignant, primary, incidental, not cause of death slide 18.</li> </ul>
			- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, minimal
		oviducts	- within normal limits
		pancreas	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1354	Е	Microscopic	
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death corresponds to macroscopic observation (pituitary gland - enlarged)</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1354	E	Microscopic	
		stomach, nonglandular	- within normal limits
		thymus	<ul> <li>depletion, lymphoid, generalized, moderate</li> </ul>
		thyroid gland	<ul> <li>hyperplasia, c-cell, focal, unilateral, minimal</li> </ul>
		tongue	<ul> <li>hyperplasia, squamous cell, moderate</li> </ul>
			<ul> <li>inflammation, subacute/chronic, moderate</li> </ul>
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1355	S	Macroscopic	
		adrenal glands	- small, right, mild
		pituitary gland	- enlarged, red, severe
1355	S	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
			<ul> <li>hyperplasia, focal medullary, unilateral, minimal</li> </ul>

S - Scheduled necropsy E - Euthanized *in extremis* 

### Individual Animal Listing - FEMALE Terminal

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
<u>0 mg/kg/day</u> 1355	S	Microscopic aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum brain esophagus eyes eyes, optic nerves eyes, retina	<ul> <li>within normal limits</li> <li>compression, ventral (pituitary tumor), mild</li> <li>within normal limits</li> </ul>
		galt harderian glands heart joint, tibiofemoral kidneys	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>cardiomyopathy, minimal</li> <li>within normal limits</li> <li>mineralization, pelvic, bilateral, minimal</li> <li>mineralization, tubular, bilateral, minimal</li> <li>nephropathy, chronic progressive, bilateral, minimal</li> </ul>

- within normal limits

- within normal limits

lacrimal glands, exorbital

large intestine, cecum

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1355	S	Microscopic	
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			<ul> <li>focus of cellular alteration, eosinophilic, moderate</li> </ul>
			- hyperplasia, bile duct, mild
			<ul> <li>vacuolation, periportal, minimal</li> </ul>
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	<ul> <li>degeneration, axonal/myelin, minimal</li> </ul>
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1355	S	Microscopic	
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- degeneration/necrosis, myofiber, minimal
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits

### Individual Animal Listing - FEMALE

Term	III Ia	ı

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1355	S	Microscopic stomach, nonglandular thymus thyroid gland  tongue trachea ureters urinary bladder uterus with cervix vagina non-correlated macro observation	<ul> <li>within normal limits</li> <li>depletion, lymphoid, generalized, moderate</li> <li>adenoma, c-cell, benign, bilateral, primary, incidental, not cause of death</li> <li>within normal limits</li> <li>adrenal glands - small</li> </ul>
1356	E	Macroscopic adrenal glands liver lymph node, axillary	<ul> <li>enlarged, bilateral, mild</li> <li>focus/foci, red, multiple lobes, mild</li> <li>within normal limits</li> <li>draining node for mass a, left and mass g, right.</li> </ul>

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1356	Ε	Macroscopic	
		lymph node, inguinal	- not identified, bilateral, no grade
			draining node for mass b and mass e, left and mass c, right.
		lymph node, mandibular	- within normal limits
			draining lymph node for mass d, left and mass f, right.
		pituitary gland	- enlarged, red, severe

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### Combined Chronic Toxicity/Oncogenicity Study 2-Year Oral Gavage Study in Rats

### Individual Animal Listing - FEMALE

			Terminal
Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1356	E	Macroscopic skin, subcutis	<ul> <li>mass, tan, mass a, left axillary area, present corresponds to antemortem observation (mass 1) approximately 3.0 x 2.5 x 1.5 cm.</li> <li>mass, tan, mass b, left inguinal area, present corresponds to antemortem observation (mass 2) approximately 2.5 x 1.5 x 1.0 cm.</li> <li>mass, tan, mass c, right inguinal area, present corresponds to antemortem observation (swelling) approximately 3.5 x 2.5 x 1.5 cm.</li> <li>mass, tan, mass d, left lateral neck, present approximately 2.5 x 1.0 x 0.75 cm.</li> <li>mass, tan, mass e, left anogenital region, present approximately 2.0 x 1.75 x 1.0 cm.</li> <li>mass, tan, mass f, right lateral neck, present approximately 3.0 x 1.5 x 1.0 cm.</li> <li>mass, tan, mass g, right axillary area, present corresponds to antemortem observation (swelling) approximately 2.0 x 1.0 x 0.5 cm.</li> </ul>
		tongue	- focus/foci, tan, mild

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1356	Е	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
			corresponds to macroscopic observation (adrenal glands - enlarged)
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	<ul> <li>compression, ventral (pituitary tumor), moderate</li> </ul>
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations	
0 mg/kg/day				
1356	E	Microscopic lacrimal glands, exorbital large intestine, cecum large intestine, colon large intestine, rectum larynx liver lung lymph node, axillary lymph node, mandibular lymph node, mesenteric	<ul> <li>within normal limits</li> <li>hyperplasia, bile duct, minimal</li> <li>necrosis, focal, minimal</li> <li>within normal limits</li> </ul>	

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1356	Е	Microscopic	
		mammary gland	<ul> <li>adenocarcinoma, malignant, multiple, primary, mortality-independent</li> <li>corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b; skin, subcutis - mass c; skin, subcutis - mass d; skin, subcutis - mass e; skin, subcutis - mass f; skin, subcutis - mass g)</li> <li>hyperplasia, lobular, mild</li> </ul>
		nerve, sciatic	- within normal limits
		nose, level a nose, level b nose, level c nose, level d ovaries oviducts pancreas parathyroid glands pharynx	<ul> <li>within normal limits</li> <li>not examined</li> <li>within normal limits</li> </ul>

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1356	E	Microscopic	
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1356	E	Microscopic thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina non-correlated macro observation  Cause of Death	<ul> <li>within normal limits</li> <li>liver - focus/foci, red</li> <li>tongue - focus/foci, tan</li> <li>pituitary tumor</li> </ul>
1357	S	Macroscopic lymph node, mandibular pituitary gland skin, subcutis	<ul> <li>within normal limits draining node for mass a, bilateral.</li> <li>enlarged, red, mild</li> <li>mass, tan, mass a, ventral neck, present corresponds to antemortem observation (swelling) approximately 2.5 cm in diameter.</li> </ul>

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1357	S	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>
			- hyperplasia, focal medullary, unilateral, minimal
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	<ul> <li>mineralization, pelvic, bilateral, minimal</li> </ul>
			<ul> <li>nephropathy, chronic progressive, bilateral, minimal</li> </ul>

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### Combined Chronic Toxicity/Oncogenicity Study 2-Year Oral Gavage Study in Rats

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1357	S	Microscopic	
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hyperplasia, bile duct, minimal
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits

err	nına	а

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1357	S	Microscopic	
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- degeneration/necrosis, myofiber, minimal
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1357	S	Microscopic stomach, glandular stomach, nonglandular thymus  thyroid gland tongue trachea ureters urinary bladder uterus with cervix	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>depletion, lymphoid, generalized, moderate</li> <li>hyperplasia, epithelial cell, minimal</li> <li>within normal limits</li> <li>hyperkeratosis, mild</li> <li>hyperplasia, squamous cell, mild</li> <li>within normal limits</li> </ul>
1358	S	Macroscopic lung with bronchi lymph node, axillary	<ul> <li>focus/foci, tan, left lobe, mild</li> <li>within normal limits</li> <li>draining node for mass b, left.</li> </ul>

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1358	S	Macroscopic	
		lymph node, mandibular	- within normal limits
			draining node for mass a, left.
		pituitary gland	- enlarged, mild
		skin, subcutis	- mass, tan, mass a, ventral neck, present
			corresponds to antemortem observation (mass 1)
			approximately 4.0 cm in diameter.
			- mass, tan, mass b, left axillary area, present
			corresponds to antemortem observation (swelling)
			approximately 1.5 cm in diameter.
1358	S	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1358	S	Microscopic	
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- dilatation, tubular, unilateral, minimal
			- hydronephrosis, unilateral, mild
			- mineralization, pelvic, bilateral, mild
			- mineralization, tubular, bilateral, minimal
			<ul> <li>nephropathy, chronic progressive, unilateral, minimal</li> </ul>
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
) mg/kg/day			
1358	S	Microscopic	
		liver	- focus of cellular alteration, basophilic, minimal
			- hyperplasia, bile duct, minimal
		lung	- histiocytosis, alveolar, mild
			corresponds to macroscopic observation (lung with bronchi - focus/foci, tan)
		lymph node, axillary	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- fibroadenoma, benign, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)
			- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1358	S	Microscopic	
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- degeneration/necrosis, myofiber, minimal
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1358	S	Microscopic	
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- hyperplasia, c-cell, focal, unilateral, moderate
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, mild
			- hyperkeratosis, minimal
			- hyperplasia, squamous cell, mild
		vagina	- within normal limits
1359	Е	Macroscopic	
		animal/whole body	- body fat depleted, moderate
		-	corresponds to antemortem observation (thin)
		pituitary gland	- enlarged, red, severe

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1359	Е	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), severe
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1359	Е	Microscopic	
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- infiltration, mononuclear cell, minimal
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- within normal limits
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- atrophy, acinar, mild
		parathyroid glands	- within normal limits
			one of pair present

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1359	Е	Microscopic	
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death corresponds to macroscopic observation (pituitary gland - enlarged)</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1359	E	Microscopic thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	<ul> <li>depletion, lymphoid, generalized, severe</li> <li>hyperplasia, c-cell, focal, unilateral, minimal</li> <li>within normal limits</li> <li>pituitary tumor</li> </ul>
1360	D	Macroscopic lymph node, inguinal pituitary gland skin, subcutis uterus with cervix	<ul> <li>not identified, left, no grade draining node for mass a.</li> <li>enlarged, severe</li> <li>mass, tan, mass a, left inguinal area, present corresponds to antemortem observation (mass 1) approximately 4.0 cm in diameter.</li> <li>enlarged, horn, mild</li> </ul>

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1360	D	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- carcinoma, pars distalis, malignant, secondary
			- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1360	D	Microscopic	
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	<ul> <li>infiltration, mononuclear cell, minimal</li> </ul>
			<ul> <li>multinucleated, hepatocytes, minimal</li> </ul>
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	<ul> <li>fibroadenoma, benign, primary, mortality-independent</li> </ul>
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild
		nerve, sciatic	<ul> <li>degeneration, axonal/myelin, minimal</li> </ul>
		nose, level a	<ul> <li>foreign material, mild plant.</li> </ul>
		nose, level b	- foreign material, moderate
			plant.
		nose, level c	- foreign material, moderate
			plant.

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1360	D	Microscopic	
		nose, level d	- foreign material, minimal
			plant.
		ovaries	- hyperplasia, sex-cord/stromal, unilateral, minimal
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	<ul> <li>carcinoma, pars distalis, malignant, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1360	D	Microscopic	
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- erosion/ulcer, mild
			- inflammation, mild
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, mild
			corresponds to macroscopic observation (uterus with cervix - enlarged)
		vagina	- within normal limits
		Cause of Death	- pituitary tumor

within normal limits draining node for mass b, left. not identified, left, no grade draining node for mass a. may be encompassed in mass a. enlarged, severe
draining node for mass b, left. not identified, left, no grade draining node for mass a. may be encompassed in mass a.
draining node for mass b, left. not identified, left, no grade draining node for mass a. may be encompassed in mass a.
not identified, left, no grade draining node for mass a. may be encompassed in mass a.
draining node for mass a. may be encompassed in mass a.
- · · · · · · · · · · · · · · · · · · ·
enlarged, severe
mass, tan, mass a, left inguinal area, present
corresponds to antemortem observation (mass 1)
approximately 8.0 x 6.0 x 4.0 cm.
mass, tan, mass b, left axillary area, present
approximately 2.5 x 2.0 x 0.5 cm.
angiectasis/cystic degeneration, focal cortical, bilateral, moderate
ganglioneuroma, benign, unilateral, primary, incidental, not cause of death
within normal limits
within normal limits
. (

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1361	D	Microscopic	
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
			- nephropathy, chronic progressive, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1361	D	Microscopic	
		liver	- focus of cellular alteration, basophilic, minimal
			- vacuolation, periportal, minimal
		lung	- within normal limits
		lymph node, axillary	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- fibroadenoma, benign, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)
			- hyperplasia, lobular, minimal
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, minimal
		oviducts	- within normal limits
		pancreas	- within normal limits
		•	

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1361	D	Microscopic	
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		skin, subcutis	<ul> <li>fibroma, benign, primary, incidental, not cause of death slide 18.</li> </ul>
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1361	D	Microscopic spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus thyroid gland  tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	<ul> <li>within normal limits</li> <li>hematopoiesis, extramedullary, increased, mild</li> <li>within normal limits</li> <li>within normal limits</li> <li>depletion, lymphoid, generalized, moderate</li> <li>adenoma, c-cell, benign, unilateral, primary, incidental, not cause of death</li> <li>within normal limits</li> <li>pituitary tumor</li> </ul>
1362	E	Macroscopic lymph node, axillary	- within normal limits draining node for mass b and mass f, right.

E - Euthanized in extremis

D - Died on Study

Fate	Tissue	Observations
E	Macroscopic	
	lymph node, inguinal	<ul> <li>not identified, bilateral, no grade</li> </ul>
		draining node for mass a and mass c, left. draining node for mass d and mass e, right.
	lymph node, mandibular	- within normal limits
		draining node for mass g, right.
	pituitary gland	- enlarged, moderate
	Fate E	E <b>Macroscopic</b> Iymph node, inguinal Iymph node, mandibular

Group, Animal Number	Fate	Tissue	Observations
mg/kg/day			
1362	Е	Macroscopic	
		skin, subcutis	- mass, tan, mass a, left anogenital region, present
			corresponds to antemortem observation (skin discolored mass 1)
			approximately 7.0 cm in diameter.
			- mass, tan, mass b, right axillary area, present
			corresponds to antemortem observation (mass 2 swelling)
			approximately 1.2 cm in diameter.
			- mass, tan, mass c, left inguinal area, present
			approximately 2.2 cm in diameter.
			<ul> <li>mass, tan, mass d, right inguinal area, present</li> </ul>
			approximately 1.2 cm in diameter.
			- mass, tan, mass e, right inguinal area, present
			approximately 1.9 cm in diameter.
			- mass, tan, mass f, right axillary area, present
			corresponds to antemortem observation (swelling)
			approximately 1.8 cm in diameter.
			- mass, tan, mass g, right lateral neck, present
1000	_		approximately 1.0 cm in diameter.
1362	Е	Microscopic	and the control of th
		adrenal glands	<ul> <li>vacuolation, focal, unilateral, minimal</li> </ul>

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1362	E	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
		•	<ul> <li>nephropathy, chronic progressive, bilateral, mild</li> </ul>
			- pyelitis, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		_	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1362	E	Microscopic large intestine, colon large intestine, rectum larynx liver lung lymph node, axillary lymph node, mandibular lymph node, mesenteric	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>hyperplasia, bile duct, minimal</li> <li>within normal limits</li> <li>within normal limits</li> <li>erythrocytosis/erythrophagocytosis, sinus, minimal</li> <li>within normal limits</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1362	Е	Microscopic	
		mammary gland	<ul> <li>adenocarcinoma, malignant, multiple, primary, mortality-independent</li> <li>corresponds to macroscopic observation (skin, subcutis - mass b; skin, subcutis - mass d; skin, subcutis - mass f)</li> <li>mass d has both an adenocarcinoma and a fibroadenoma.</li> <li>fibroadenoma, benign, multiple, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a;</li> </ul>
			skin, subcutis - mass c; skin, subcutis - mass d; skin, subcutis - mass e; skin, subcutis - mass g) - hyperplasia, lobular, minimal
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1362	E	Microscopic	
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1362	E	Microscopic stomach, glandular stomach, nonglandular thymus  thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>depletion, lymphoid, generalized, moderate</li> <li>hyperplasia, epithelial cell, minimal</li> <li>within normal limits</li> <li>dilatation, gland/lumen, minimal</li> <li>within normal limits</li> <li>mammary tumor</li> </ul>
1363	D	Macroscopic liver lymph node, inguinal	<ul> <li>focus/foci, tan, left lateral lobe, mild</li> <li>not identified, left, no grade</li> <li>draining node for mass a.</li> </ul>

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1363	D	Macroscopic	
		skin, subcutis	- mass, tan, mass a, left inguinal area, present
			corresponds to antemortem observation (mass 1)
			approximately 12.5 x 10.0 x 5.0 cm.
1363	D	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- hyperplasia, granulocytic, mild
		bone marrow, sternum	- hyperplasia, granulocytic, mild
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal

D   Microscopic   joint, tibiofemoral   within normal limits   kidneys   mineralization, pelvic, unilateral, minimal   within normal limits   large intestine, cecum   within normal limits   large intestine, colon   within normal limits   large intestine, rectum   within normal limits   larynx   within normal limits   larynx   mithin normal limits   larynx   mithin normal limits   larynx   mithin normal limits   liver   focus of cellular alteration, basophilic, minimal   hyperplasia, bile duct, minimal   infiltration, mononuclear cell, minimal   necrosis, focal, moderate   corresponds to macroscopic observation (liver - focus of cellular alteration)   within normal limits   withi	
D Microscopic joint, tibiofemoral kidneys lacrimal glands, exorbital large intestine, cecum large intestine, rectum larynx liver liver liver lung lymph node, mandibular lymph node, mesenteric mammary gland  bidneys  mineralization, pelvic, unilateral, minimal within normal limits limits limits limits limits limits limits limits limits limitration, basophilic, minimal limitits limitration, mononuclear cell, minimal limits within normal limits	
kidneys	
lacrimal glands, exorbital large intestine, cecum large intestine, colon large intestine, rectum large intestine, rectum larynx liver  - within normal limits - within normal limits - within normal limits - within normal limits - focus of cellular alteration, basophilic, minimal - hyperplasia, bile duct, minimal - infiltration, mononuclear cell, minimal - necrosis, focal, moderate - corresponds to macroscopic observation (liver - focus - within normal limits - within normal limi	
large intestine, cecum	
large intestine, colon large intestine, rectum larynx liver  - within normal limits - within normal limits - within normal limits - focus of cellular alteration, basophilic, minimal - hyperplasia, bile duct, minimal - hyperplasia, bile duct, minimal - infiltration, mononuclear cell, minimal - necrosis, focal, moderate - corresponds to macroscopic observation (liver - focus - within normal limits	
large intestine, rectum larynx - within normal limits liver - focus of cellular alteration, basophilic, minimal - hyperplasia, bile duct, minimal - infiltration, mononuclear cell, minimal - necrosis, focal, moderate - corresponds to macroscopic observation (liver - focus - within normal limits	
larynx    within normal limits	
liver  - focus of cellular alteration, basophilic, minimal - hyperplasia, bile duct, minimal - infiltration, mononuclear cell, minimal - necrosis, focal, moderate - corresponds to macroscopic observation (liver - focus - within normal limits - within normal limits - lymph node, mandibular - lymph node, mesenteric - mammary gland - fibroadenoma, benign, primary, mortality-independen	
<ul> <li>hyperplasia, bile duct, minimal</li> <li>infiltration, mononuclear cell, minimal</li> <li>necrosis, focal, moderate</li> <li>corresponds to macroscopic observation (liver - focus</li> <li>lung</li> <li>within normal limits</li> <li>lymph node, mandibular</li> <li>within normal limits</li> <li>within normal limits</li> <li>mammary gland</li> <li>hyperplasia, bile duct, minimal</li> <li>infiltration, mononuclear cell, minimal</li> <li>within normal limits</li> <li>within normal limits</li> <li>fibroadenoma, benign, primary, mortality-independent</li> </ul>	
- infiltration, mononuclear cell, minimal - necrosis, focal, moderate - corresponds to macroscopic observation (liver - focus - within normal limits - within normal limits - lymph node, mandibular - lymph node, mesenteric - within normal limits - within normal limits - fibroadenoma, benign, primary, mortality-independen	
- necrosis, focal, moderate corresponds to macroscopic observation (liver - focus lung - within normal limits lymph node, mandibular lymph node, mesenteric mammary gland - necrosis, focal, moderate corresponds to macroscopic observation (liver - focus within normal limits - within normal limits - within normal limits - fibroadenoma, benign, primary, mortality-independen	
corresponds to macroscopic observation (liver - focus lung - within normal limits lymph node, mandibular - within normal limits lymph node, mesenteric - within normal limits mammary gland - fibroadenoma, benign, primary, mortality-independer	
lung - within normal limits lymph node, mandibular - within normal limits lymph node, mesenteric - within normal limits mammary gland - fibroadenoma, benign, primary, mortality-independer	
lymph node, mandibular - within normal limits lymph node, mesenteric - within normal limits mammary gland - fibroadenoma, benign, primary, mortality-independer	us/foci, tan)
lymph node, mesenteric - within normal limits mammary gland - fibroadenoma, benign, primary, mortality-independer	•
mammary gland - fibroadenoma, benign, primary, mortality-independer	
mammary gland - fibroadenoma, benign, primary, mortality-independer	
	ent
corresponds to macroscopic observation (skin, subci	
- hyperplasia, lobular, minimal	,
nerve, sciatic - within normal limits	

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1363	D	Microscopic	
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- fibrosis, minimal
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1363	D	Microscopic spinal cord, cervical spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>hematopoiesis, extramedullary, increased, minimal</li> <li>within normal limits</li> <li>within normal limits</li> <li>depletion, lymphoid, generalized, moderate</li> <li>within normal limits</li> <li>mammary tumor</li> </ul>
1364	E	Macroscopic lymph node, inguinal	- within normal limits draining node for mass a, left.

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1364	E	Macroscopic pituitary gland skin, subcutis	<ul> <li>enlarged, red, severe</li> <li>mass, ulcerated, mass a, left inguinal area, present corresponds to antemortem observation (mass 1) approximately 7.0 x 5.0 x 3.0 cm, tan.</li> </ul>
1364	E	Microscopic adrenal glands aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum brain esophagus eyes eyes, optic nerves eyes, retina galt harderian glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, mild</li> <li>within normal limits</li> <li>hyperplasia, granulocytic, mild</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>compression, ventral (pituitary tumor), mild</li> <li>within normal limits</li> </ul>

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1364	E	Microscopic	
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- hydronephrosis, unilateral, moderate
			- mineralization, pelvic, unilateral, minimal
			- nephropathy, chronic progressive, bilateral, mild
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			- hematopoiesis, extramedullary, minimal
			- vacuolation, periportal, minimal
		lung	- within normal limits
		lymph node, inguinal	- not examined
		-	misidentified tissue
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1364	Е	Microscopic	
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, parotid	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1364	Е	Microscopic	
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, mild
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- dilatation, unilateral, mild
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1364	E	Microscopic	
		vagina	- within normal limits
		Cause of Death	- mammary tumor
1365	S	Macroscopic	
		pituitary gland	- enlarged, tan, moderate
1365	S	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>
			- hyperplasia, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1365	S	Microscopic	
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- dilatation, tubular, unilateral, minimal
			- edema, papilla, unilateral, mild
			- hydronephrosis, unilateral, mild
			- nephropathy, chronic progressive, bilateral, mild
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- erosion/ulcer, mild
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			- hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, minimal
		lung	- histiocytosis, alveolar, minimal
		-	•

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1365	S	Microscopic	
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1365	S	Microscopic	
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- degeneration/necrosis, myofiber, minimal
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		dicido with cervix	within normal littles

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1365	S	<b>Microscopic</b> vagina	- within normal limits
1366	E	Macroscopic lymph node, axillary lymph node, brachial lymph node, inguinal pituitary gland skin, subcutis	<ul> <li>within normal limits draining node for mass a, right.</li> <li>within normal limits draining node for mass a, right.</li> <li>not identified, right, no grade draining node for mass b.</li> <li>enlarged, red, moderate</li> <li>mass, tan, mass a, right axillary area, present corresponds to antemortem observation (mass 1) approximately 10.0 x 8.0 x 3.0 cm.</li> <li>mass, tan, mass b, right inguinal area, present</li> </ul>
1366	E	Microscopic adrenal glands	corresponds to antemortem observation (skin discolored mass 2) approximately 6.0 x 5.2 x 2.2 cm.  - angiectasis/cystic degeneration, focal cortical, bilateral, moderate

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1366	Е	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- hyperplasia, granulocytic, mild
		bone marrow, sternum	- hyperplasia, granulocytic, minimal
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits

## Individual Animal Listing - FEMALE

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Group, Animal Number	Fate	Tissue	Observations
mg/kg/day			
1366	E	Microscopic	
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, axillary	- within normal limits
		lymph node, brachial	- not examined
		lymph node, mandibular	- erythrocytosis/erythrophagocytosis, sinus, minimal
		lymph node, mesenteric	- within normal limits
		mammary gland	<ul> <li>adenocarcinoma, malignant, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass b)</li> </ul>
			- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, minimal
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- exudate, nasal passage, minimal
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1366	Е	Microscopic	
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1366	E	Microscopic stomach, glandular stomach, nonglandular thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>depletion, lymphoid, generalized, moderate</li> <li>within normal limits</li> <li>dilatation, gland/lumen, mild</li> <li>within normal limits</li> <li>mammary tumor</li> </ul>
1367	E	Macroscopic lymph node, inguinal skin, subcutis	<ul> <li>absent, left, no grade draining node for mass a.</li> <li>mass, tan, mass a, anogenital region, present corresponds to antemortem observation (mass 1) approximately 7.0 x 6.0 x 4.0 cm.</li> </ul>

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1367	E	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
			- nephropathy, chronic progressive, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
) mg/kg/day			
1367	Е	Microscopic	
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, eosinophilic, minimal
			- hyperplasia, bile duct, mild
		lung	- within normal limits
		lymph node, mandibular	<ul> <li>erythrocytosis/erythrophagocytosis, sinus, minimal</li> </ul>
		lymph node, mesenteric	- within normal limits
		mammary gland	- dilatation, gland/lumen, mild
			- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1367	E	Microscopic	
		parathyroid glands	- hyperplasia, focal, unilateral, minimal
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1367	E	Microscopic thymus thyroid gland  tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	<ul> <li>depletion, lymphoid, generalized, moderate</li> <li>adenoma, c-cell, benign, unilateral, primary, incidental, not cause of death</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>hyperplasia, endometrial, mild</li> <li>within normal limits</li> <li>mammary tumor</li> </ul>
1368	S	Macroscopic lymph node, inguinal skin, subcutis	<ul> <li>not identified, right, no grade draining node for mass a.</li> <li>mass, tan, mass a, right inguinal area, present corresponds to antemortem observation (mass 1) approximately 8.0 cm in diameter.</li> </ul>

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1368	S	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1368	S	Microscopic	
		kidneys	- edema, papilla, bilateral, mild
			- hydronephrosis, bilateral, mild
			- hyperplasia, transitional cell, bilateral, minimal
			- macrophages, pigmented, unilateral, minimal
			- mineralization, tubular, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- angiectasis, minimal
			- focus of cellular alteration, basophilic, mild
			- focus of cellular alteration, eosinophilic, minimal
			- hyperplasia, bile duct, minimal
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
) mg/kg/day			
1368	S	Microscopic	
		mammary gland	- fibroadenoma, benign, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			slide 18 and 26-1.
			- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	<ul> <li>hyperplasia, focal, unilateral, mild</li> </ul>
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1368	S	Microscopic	
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- degeneration/necrosis, myofiber, minimal
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, mild
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- dilatation, bilateral, mild
		urinary bladder	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1368	S	Microscopic	
		uterus with cervix	- dilatation, gland/lumen, mild
			- hyperplasia, endometrial, mild
		vagina	- within normal limits
1369	Е	Macroscopic	
		cavity, thoracic	- fluid, red, minimal
			approximately 1.0 ml of fluid.
		mammary gland	- swollen/thickened, tan, inguinal, left, mild
			corresponds to antemortem observation (swelling)
		pituitary gland	- enlarged, tan, moderate
		skin	- abrasion/scab, inguinal, right, moderate
			corresponds to antemortem observation (mass 1)
		spleen	- enlarged, mild
1369	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, mild</li> </ul>
			<ul> <li>hyperplasia, focal cortical, unilateral, mild</li> </ul>
		aorta	- within normal limits

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1369	Е	Microscopic	
		bone marrow, femur	- hyperplasia, granulocytic, mild
		bone marrow, sternum	- hyperplasia, granulocytic, minimal
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
		,	- mineralization, tubular, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		- 3,	

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1369	E	Microscopic	
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			- hematopoiesis, extramedullary, minimal
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
			corresponds to macroscopic observation (mammary gland - swollen/thickened)
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	<ul> <li>hyperplasia, sex-cord/stromal, bilateral, mild</li> </ul>
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
) mg/kg/day			
1369	E	Microscopic	
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- erosion/ulcer, moderate
			corresponds to macroscopic observation (skin - abrasion/scab)
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, mild
			corresponds to macroscopic observation (spleen - enlarged)
		stomach, glandular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1369	E	Microscopic	
		stomach, nonglandular	- within normal limits
		thymus	<ul> <li>depletion, lymphoid, generalized, moderate</li> </ul>
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- skin inflammation/necrosis
1370	S	Macroscopic	
		pituitary gland	- cyst, clear, mild
1370	S	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1370	S	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, tubular, bilateral, minimal
			<ul> <li>nephropathy, chronic progressive, bilateral, mild</li> </ul>
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1370	S	Microscopic	
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- infiltration, mononuclear cell, minimal
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, minimal
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1370	S	Microscopic	
		pituitary gland	- cyst, moderate
			corresponds to macroscopic observation (pituitary gland - cyst)
			<ul> <li>hyperplasia, focal, pars distalis, mild</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	<ul> <li>degeneration/necrosis, myofiber, minimal</li> </ul>
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits

Group, Animal Number	Fate	Tissue	Observations	
0 mg/kg/day				
1370	S	Microscopic tongue trachea ureters urinary bladder uterus with cervix vagina	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>dilatation, gland/lumen, mild</li> <li>within normal limits</li> </ul>	
1371	E	Macroscopic all tissues	- within normal limits	
1371	E	Microscopic adrenal glands aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum brain	<ul> <li>within normal limits</li> </ul>	

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1371	E	Microscopic	
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, tubular, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	<ul> <li>infiltration, mononuclear cell, minimal</li> </ul>
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1371	E	Microscopic	
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	<ul> <li>adenoma, islet cell, benign, primary, incidental, not cause of death</li> </ul>
		parathyroid glands	<ul> <li>within normal limits         one of pair present</li> </ul>
		pharynx	- within normal limits
		pituitary gland	- within normal limits
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1371	E	Microscopic	
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	<ul> <li>carcinoma, follicular cell, malignant, unilateral, primary, incidental, not cause of death</li> </ul>
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- undetermined

Group,			Tommu
Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1372	S	Macroscopic	
		lymph node, mandibular	<ul> <li>within normal limits</li> <li>bilateral, draining node for mass a.</li> </ul>
		skin, subcutis	<ul> <li>mass, tan, mass a, ventral neck, present corresponds to antemortem observation (mass 1) approximately 7.0 x 5.5 x 2.0 cm.</li> </ul>
1372	S	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1372	S	Microscopic	
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
			- mineralization, tubular, unilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hematopoiesis, extramedullary, minimal
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild

		16	entina
Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1372	S	Microscopic	
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- degeneration/necrosis, myofiber, minimal
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1372	S	Microscopic small intestine, jejunum spinal cord, cervical spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>hematopoiesis, extramedullary, increased, minimal</li> <li>within normal limits</li> <li>within normal limits</li> <li>depletion, lymphoid, generalized, moderate</li> <li>within normal limits</li> </ul>
1373	E	Macroscopic lymph node, axillary	- within normal limits draining node for mass b, right.

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1373	Е	Macroscopic	MI 1 I M M .
		lymph node, inguinal	<ul> <li>within normal limits</li> <li>draining node for mass a, left.</li> </ul>
		pituitary gland	- enlarged, red, mild
		skin, subcutis	- mass, tan, mass a, anogenital region, present
			corresponds to antemortem observation (mass 1)
			approximately 3.0 x 1.5 x 1.0 cm.
			<ul> <li>mass, ulcerated, mass b, right axillary area, present</li> </ul>
			corresponds to antemortem observation (scabbed area mass 2)
	_		approximately 6.0 cm in diameter, tan.
1373	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, unilateral, mild</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	<ul> <li>compression, ventral (pituitary tumor), minimal</li> </ul>
		esophagus	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1373	Е	Microscopic	
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- nephropathy, chronic progressive, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- within normal limits
		lung	- within normal limits
		lymph node, axillary	- within normal limits
		lymph node, inguinal	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1373	Е	Microscopic	
1070		mammary gland	<ul> <li>adenocarcinoma, malignant, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a)</li> <li>adenoma, benign, primary, incidental, not cause of death slide 18.</li> <li>fibroadenoma, benign, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass b)</li> <li>hyperplasia, lobular, mild</li> </ul>
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- atrophy, acinar, minimal
		parathyroid glands	- not examined
		pharynx	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1373	E	Microscopic	
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death corresponds to macroscopic observation (pituitary gland -</li> </ul>
			enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1373	Е	Microscopic	
		thymus	<ul><li>depletion, lymphoid, generalized, severe</li><li>hyperplasia, epithelial cell, minimal</li></ul>
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- metaplasia, squamous, minimal
		vagina	- within normal limits
		Cause of Death	- mammary tumor
1374	S	Macroscopic	
		adrenal glands	- enlarged, right, mild
		lymph node, inguinal	- within normal limits
			draining node for mass a, left. draining node for mass b, right.

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1374	S	Macroscopic	
		skin, subcutis	- mass, tan, mass a, left inguinal area, present
			corresponds to antemortem observation (mass 1)
			approximately 6.0 x 3.0 x 1.0 cm.
			- mass, tan, mass b, right inguinal area, present
			approximately 1.0 cm in diameter.
		uterus with cervix	- enlarged, horn, mild
1374	S	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
			corresponds to macroscopic observation (adrenal glands - enlarged)
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits

S - Scheduled necropsy

			remina
Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1374	S	Microscopic	
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- degeneration/atrophy, retina, bilateral, mild
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
			<ul> <li>nephropathy, chronic progressive, bilateral, minimal</li> </ul>
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hyperplasia, bile duct, minimal
			- infiltration, mononuclear cell, minimal
			- vacuolation, focal, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, inguinal	- within normal limits

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
) mg/kg/day			
1374	S	Microscopic	
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	<ul> <li>adenocarcinoma, malignant, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (skin, subcutis - mass b)
			- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1374	S	Microscopic	
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- degeneration/necrosis, myofiber, minimal
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- cyst, keratin, minimal
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1374	S	Microscopic tongue trachea ureters urinary bladder uterus with cervix	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>granular cell tumor, benign, primary, incidental, not cause of death</li> <li>hyperplasia, cystic endometrial, mild corresponds to macroscopic observation (uterus with cervix - enlarged)</li> <li>within normal limits</li> </ul>
1375	E	Macroscopic liver lymph node, inguinal mammary gland pituitary gland	<ul> <li>cyst, clear, caudate lobe, mild</li> <li>within normal limits draining node for mass a, left.</li> <li>swollen/thickened, ventral abdomen, left axillary area, mild corresponds to antemortem observation (swelling)</li> <li>enlarged, severe</li> </ul>

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1375	Е	Macroscopic	
		skin, subcutis	- mass, brown, mass a, left anogenital region, present
			corresponds to antemortem observation (mass 1)
			approximately 2.0 cm in diameter.
1375	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	<ul> <li>compression, ventral (pituitary tumor), moderate</li> </ul>
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1375	E	Microscopic	
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	<ul> <li>nephropathy, chronic progressive, bilateral, minimal</li> </ul>
			- pyelitis, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- cyst, biliary, simple, mild
			corresponds to macroscopic observation (liver - cyst)
			- hyperplasia, bile duct, minimal
			- infiltration, mononuclear cell, minimal
		lung	- within normal limits
		lymph node, inguinal	- within normal limits
		lymph node, mandibular	- erythrocytosis/erythrophagocytosis, sinus, mild
		lymph node, mesenteric	- within normal limits
		lymph node, mesenteric	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1375	E	Microscopic	
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild
			corresponds to macroscopic observation (mammary gland - swollen/thickened)
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, mild
			<ul> <li>hyperplasia, sex-cord/stromal, unilateral, minimal</li> </ul>
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1375	E	Microscopic	
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
			one of pair present

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1375	E	Microscopic urinary bladder uterus with cervix vagina Cause of Death	<ul><li>within normal limits</li><li>within normal limits</li><li>within normal limits</li><li>pituitary tumor</li></ul>
1376	E	Macroscopic adrenal glands lymph node, axillary lymph node, inguinal	<ul> <li>enlarged, red, moderate</li> <li>within normal limits</li> <li>draining node for mass b, right.</li> <li>within normal limits</li> </ul>
		skin, subcutis uterus with cervix	draining node for mass a, right.  - mass, tan, mass b, right axillary area, present corresponds to antemortem observation (swelling) approximately 4.5 cm in diameter.  - mass, ulcerated, mass a, right inguinal area, present corresponds to antemortem observation (mass 1) approximately 11.0 x 8.0 x 3.0 cm, tan.  - enlarged, horn, mild

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1376	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, severe</li> </ul>
			corresponds to macroscopic observation (adrenal glands - enlarged)
			<ul> <li>atrophy, cortical, unilateral, severe</li> </ul>
		aorta	- mineralization, mild
		bone marrow, femur	<ul> <li>hyperplasia, granulocytic, mild</li> </ul>
		bone marrow, sternum	<ul> <li>hyperplasia, granulocytic, minimal</li> </ul>
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, mild
		joint, tibiofemoral	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1376	E	Microscopic kidneys lacrimal glands, exorbital large intestine, cecum large intestine, colon large intestine, rectum larynx liver  lung lymph node, axillary lymph node, inguinal lymph node, mandibular lymph node, mesenteric	<ul> <li>nephropathy, chronic progressive, bilateral, moderate</li> <li>within normal limits</li> <li>focus of cellular alteration, basophilic, minimal</li> <li>focus of cellular alteration, clear, mild</li> <li>focus of cellular alteration, eosinophilic, minimal</li> <li>hyperplasia, bile duct, minimal</li> <li>infiltration, mononuclear cell, minimal</li> <li>necrosis, focal, minimal</li> <li>hemorrhage, minimal</li> <li>within normal limits</li> <li>within normal limits</li> <li>erythrocytosis/erythrophagocytosis, sinus, minimal</li> <li>within normal limits</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
) mg/kg/day			
1376	Е	Microscopic	
		mammary gland	<ul> <li>adenocarcinoma, malignant, primary, incidental, not cause of death</li> <li>slide 18 r-1.</li> <li>fibroadenoma, benign, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass b)</li> </ul>
			- hyperplasia, lobular, moderate
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, bilateral, mild
		oviducts	- within normal limits
		pancreas	- atrophy, acinar, minimal
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
		salivary gland, mandibular	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1376	Е	Microscopic	
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		skin, subcutis	- fibroma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, mild
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits

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### Combined Chronic Toxicity/Oncogenicity Study 2-Year Oral Gavage Study in Rats

1376   E   Microscopic   ureters   within normal limits   wagina   within normal limits   wagina   within normal limits   wagina   within normal limits   wagina   within normal limits   within normal limits   wagina	Group, Animal Number	Fate	Tissue	Observations
1376  Because Interes	0 mg/kg/day			
ureters urinary bladder uterus with cervix  dilatation, gland/lumen, mild corresponds to macroscopic observation (uterus with cervix - enlarged) - hyperplasia, endometrial, mild vagina - within normal limits - hyperplasia, endometrial, mild - within normal limits - fibrosarcoma/fibroma  1377  D  Macroscopic eyes - absent/cannibalized, left, no grade corresponds to antemortem observation (cannibalized/partially cannibalized) eyes, retina - absent/cannibalized, left, no grade corresponds to antemortem observation (cannibalized/partially cannibalized) - absent portion/cannibalized, no grade corresponds to antemortem observation (cannibalized/partially cannibalized) - absent portion/cannibalized, no grade corresponds to antemortem observation (cannibalized/partially cannibalized) - absent portion/cannibalized, no grade corresponds to antemortem observation (cannibalized/partially cannibalized)		E	Microscopic	
uterus with cervix  - dilatation, gland/lumen, mild corresponds to macroscopic observation (uterus with cervix - enlarged) - hyperplasia, endometrial, mild vagina Cause of Death  - within normal limits Cause of Death  - fibrosarcoma/fibroma  1377  D Macroscopic eyes - absent/cannibalized, left, no grade corresponds to antemortem observation (cannibalized/partially cannibalized) eyes, retina - absent/cannibalized, left, no grade corresponds to antemortem observation (cannibalized/partially cannibalized)  tongue - absent portion/cannibalized, no grade corresponds to antemortem observation (cannibalized/partially cannibalized) - absent portion/cannibalized, no grade corresponds to antemortem observation (cannibalized/partially cannibalized)  absent portion/cannibalized, no grade corresponds to antemortem observation (cannibalized/partially cannibalized)			-	- within normal limits
corresponds to macroscopic observation (uterus with cervix - enlarged) - hyperplasia, endometrial, mild vagina - within normal limits - fibrosarcoma/fibroma  1377  D  Macroscopic eyes - absent/cannibalized, left, no grade corresponds to antemortem observation (cannibalized/partially cannibalized) eyes, retina - absent/cannibalized, left, no grade corresponds to antemortem observation (cannibalized/partially cannibalized) tongue - absent portion/cannibalized, no grade corresponds to antemortem observation (cannibalized/partially cannibalized) absent portion/cannibalized, no grade corresponds to antemortem observation (cannibalized/partially cannibalized)  1377  D  Microscopic			urinary bladder	- within normal limits
enlarged) - hyperplasia, endometrial, mild - within normal limits - fibrosarcoma/fibroma  1377  D  Macroscopic - eyes - absent/cannibalized, left, no grade - corresponds to antemortem observation (cannibalized/partially - cannibalized) - absent/cannibalized, left, no grade - corresponds to antemortem observation (cannibalized/partially - cannibalized) - tongue - absent portion/cannibalized, no grade - corresponds to antemortem observation (cannibalized/partially - cannibalized) - absent portion/cannibalized, no grade - corresponds to antemortem observation (cannibalized/partially - cannibalized)  Microscopic			uterus with cervix	- dilatation, gland/lumen, mild
vagina - within normal limits Cause of Death - fibrosarcoma/fibroma  D Macroscopic eyes - absent/cannibalized, left, no grade corresponds to antemortem observation (cannibalized/partially cannibalized) eyes, retina - absent/cannibalized, left, no grade corresponds to antemortem observation (cannibalized/partially cannibalized) tongue - absent portion/cannibalized, no grade corresponds to antemortem observation (cannibalized/partially cannibalized) absent portion/cannibalized, no grade corresponds to antemortem observation (cannibalized/partially cannibalized)				
Cause of Death  D  Macroscopic eyes  - absent/cannibalized, left, no grade corresponds to antemortem observation (cannibalized/partially cannibalized) eyes, retina  - absent/cannibalized, left, no grade corresponds to antemortem observation (cannibalized/partially cannibalized)  - absent/cannibalized, left, no grade corresponds to antemortem observation (cannibalized/partially cannibalized)  - absent portion/cannibalized, no grade corresponds to antemortem observation (cannibalized/partially cannibalized)  - absent portion/cannibalized, no grade corresponds to antemortem observation (cannibalized/partially cannibalized)				<ul> <li>hyperplasia, endometrial, mild</li> </ul>
D Macroscopic eyes - absent/cannibalized, left, no grade corresponds to antemortem observation (cannibalized/partially cannibalized) eyes, retina - absent/cannibalized, left, no grade corresponds to antemortem observation (cannibalized/partially cannibalized) tongue - absent portion/cannibalized, no grade corresponds to antemortem observation (cannibalized/partially cannibalized)  absent portion/cannibalized, no grade corresponds to antemortem observation (cannibalized/partially cannibalized)			vagina	- within normal limits
eyes - absent/cannibalized, left, no grade			Cause of Death	- fibrosarcoma/fibroma
eyes - absent/cannibalized, left, no grade	1377	D	Macroscopic	
cannibalized) eyes, retina - absent/cannibalized, left, no grade corresponds to antemortem observation (cannibalized/partially cannibalized) - absent portion/cannibalized, no grade corresponds to antemortem observation (cannibalized/partially cannibalized)  1377  D Microscopic				- absent/cannibalized, left, no grade
corresponds to antemortem observation (cannibalized/partially cannibalized)  tongue  - absent portion/cannibalized, no grade corresponds to antemortem observation (cannibalized/partially cannibalized)  1377  D Microscopic				
cannibalized) tongue - absent portion/cannibalized, no grade corresponds to antemortem observation (cannibalized/partially cannibalized)  D Microscopic			eyes, retina	- absent/cannibalized, left, no grade
corresponds to antemortem observation (cannibalized/partially cannibalized)  1377 D Microscopic				
cannibalized)  1377 D Microscopic			tongue	- absent portion/cannibalized, no grade
adrenal glands - angiectasis/cystic degeneration, focal cortical unilateral mild	1377	D	Microscopic	
angle-station, rotal control time and the state of the st			adrenal glands	- angiectasis/cystic degeneration, focal cortical, unilateral, mild

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1377	D	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
			one of pair present
		eyes, optic nerves	- within normal limits
		eyes, retina	- not examined
			one cannibalized, one too autolytic to examine.
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- within normal limits
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits

<u>0 mg/kg/day</u> 1377	D		
	D		
		Microscopic	
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- vacuolation, periportal, mild
		lung	- bacterial colonies, minimal
		-	red blood cell lysis in alveolar septae.
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- fibrosis, minimal
		parathyroid glands	- within normal limits
		. , ,	one of pair present

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1377	D	Microscopic	
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe
		thyroid gland	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1377	D	Microscopic	
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- not examined
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- probable dosing injury
1378	D	Macroscopic	
		pituitary gland	- enlarged, mild
1378	D	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- hyperplasia, granulocytic, mild
		bone marrow, sternum	- hyperplasia, granulocytic, mild
		bone, femur	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1378	D	Microscopic	
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- dilatation, tubular, bilateral, mild
			- edema, papilla, bilateral, mild
			- mineralization, pelvic, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- infiltration, mononuclear cell, minimal

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1378	D	Microscopic	
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, minimal
		mesentery/peritoneum	- polyarteritis, moderate
			slide 11 and 12.
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, mild
			- hyperplasia, sex-cord/stromal, bilateral, mild
		oviducts	- within normal limits
		pancreas	- polyarteritis, moderate
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1378	D	Microscopic	
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1378	D	Microscopic	
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1379	E	Macroscopic	
		pituitary gland	- enlarged, red, severe
1379	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1379	E	Microscopic	
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- within normal limits
		lung	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1379	Е	Microscopic	
		lymph node, mandibular	- erythrocytosis/erythrophagocytosis, sinus, mild
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits

E - Euthanized in extremis

0 mg/kg/day 1379			
	Ε	Microscopic	
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		,	- hyperplasia, epithelial cell, mild
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1379	E	Microscopic urinary bladder uterus with cervix vagina Cause of Death	<ul><li>within normal limits</li><li>within normal limits</li><li>within normal limits</li><li>pituitary tumor</li></ul>
1380	E	Macroscopic lymph node, inguinal pituitary gland skin, subcutis	<ul> <li>not identified, left, no grade draining node for mass a.</li> <li>enlarged, tan, mild</li> <li>mass, ulcerated, mass a, left inguinal area, present corresponds to antemortem observation (mass 1) approximately 8.0 cm in diameter, tan.</li> </ul>
1380	E	Microscopic adrenal glands aorta	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> <li>hematopoiesis, extramedullary, bilateral, minimal</li> <li>within normal limits</li> </ul>

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1380	Е	Microscopic	
		bone marrow, femur	- hyperplasia, granulocytic, minimal
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
) mg/kg/day			
1380	Е	Microscopic	
		larynx	- within normal limits
		liver	- hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, minimal
			- vacuolation, diffuse, mild
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	<ul> <li>adenocarcinoma, malignant, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a)</li> </ul>
			- hyperplasia, lobular, minimal
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1380	Е	Microscopic	
		pharynx	- within normal limits
		pituitary gland	- hyperplasia, diffuse, pars distalis, mild
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, mild
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1380	E	Microscopic	
		thymus	- depletion, lymphoid, generalized, severe
			<ul> <li>hyperplasia, epithelial cell, minimal</li> </ul>
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- mammary tumor
1381	Е	Macroscopic	
		pituitary gland	- enlarged, severe
1381	E	Microscopic	
		adrenal glands	- within normal limits
		aorta	- within normal limits
		bone marrow, femur	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1381	Е	Microscopic	
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), severe
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- cyst, unilateral, minimal
			- mineralization, pelvic, bilateral, minimal
			- nephropathy, chronic progressive, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations	
0 mg/kg/day				
1381	Е	Microscopic		
		larynx	- within normal limits	
		liver	<ul> <li>multinucleated, hepatocytes, mild</li> </ul>	
			<ul> <li>vacuolation, periportal, minimal</li> </ul>	
		lung	- within normal limits	
		lymph node, mandibular	- within normal limits	
		lymph node, mesenteric	- within normal limits	
		mammary gland	- within normal limits	
		nerve, sciatic	- within normal limits	
		nose, level a	- within normal limits	
		nose, level b	- within normal limits	
		nose, level c	- within normal limits	
		nose, level d	- within normal limits	
		ovaries	- cyst, bilateral, minimal	
		oviducts	- within normal limits	
		pancreas	- fibrosis, minimal	
		parathyroid glands	- within normal limits	
			one of pair present	
		pharynx	- within normal limits	

E - Euthanized in extremis

### Individual Animal Listing - FEMALE Terminal

Group, Observations Animal Number Fate Tissue 0 mg/kg/day 1381 Ε Microscopic pituitary gland - adenoma, pars distalis, benign, primary, fatal, positive cause of death corresponds to macroscopic observation (pituitary gland enlarged) salivary gland, mandibular - within normal limits salivary gland, parotid - within normal limits salivary gland, sublingual - within normal limits skeletal muscle, biceps femoris - within normal limits - within normal limits skin small intestine, duodenum - within normal limits small intestine, ileum - within normal limits small intestine, jejunum - within normal limits spinal cord, cervical - within normal limits spinal cord, lumbar - within normal limits spinal cord, thoracic - within normal limits spleen - within normal limits stomach, glandular - within normal limits stomach, nonglandular - within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1381	E	Microscopic	
		thymus	- depletion, lymphoid, generalized, moderate
			<ul> <li>hyperplasia, epithelial cell, mild</li> </ul>
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, minimal
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1382	D	Macroscopic	
		ears	- nodule, tan, right, present
			approximately 0.4 cm in diameter.
		lymph node, inguinal	- within normal limits
			draining node for mass a, left.
		pituitary gland	- enlarged, red, moderate

E - Euthanized in extremis

D - Died on Study

Macroscopic skin, subcutis  Microscopic adrenal glands	- mass, tan, mass a, left anogenital region, present approximately 2.5 cm in diameter.
skin, subcutis  Microscopic	approximately 2.5 cm in diameter.
Microscopic	approximately 2.5 cm in diameter.
<u> </u>	
<u> </u>	
adrenal glands	
	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>
	<ul> <li>hyperplasia, focal medullary, bilateral, mild</li> </ul>
aorta	- within normal limits
bone marrow, femur	- within normal limits
bone marrow, sternum	- within normal limits
bone, femur	- within normal limits
bone, sternum	- within normal limits
brain	- within normal limits
esophagus	- within normal limits
eyes	- within normal limits
eyes, optic nerves	- within normal limits
eyes, retina	- within normal limits
galt	- within normal limits
harderian glands	- within normal limits
	bone, femur bone, sternum brain esophagus eyes eyes, optic nerves eyes, retina galt

Group, Animal Number	Fate	Tissue	Observations
) mg/kg/day			
1382	D	Microscopic	
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			<ul> <li>nephropathy, chronic progressive, bilateral, mild</li> </ul>
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- degeneration, cystic, focal, minimal
			- hyperplasia, bile duct, mild
		lung	- within normal limits
		lymph node, inguinal	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- dilatation, sinus, minimal
		mammary gland	- fibroadenoma, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1382	D	Microscopic	
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- foreign material, mild
			plant.
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1382	D	Microscopic	
		skin, subcutis	- schwannoma, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (ears - nodule)
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, minimal
			- metaplasia, squamous, minimal

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1382	D	<b>Microscopic</b> vagina Cause of Death	<ul><li>within normal limits</li><li>undetermined</li></ul>
1383	D	Macroscopic lymph node, axillary pituitary gland skin, subcutis	<ul> <li>within normal limits draining node for mass a, right.</li> <li>enlarged, red, mild</li> <li>mass, ulcerated, mass a, right axillary area, present corresponds to antemortem observation (mass 1 cannibalized/partially cannibalized) approximately 10.0 x 6.5 x 5.5 cm, tan. majority of skin covering mass appears to be cannibalized.</li> </ul>
1383	D	Microscopic adrenal glands aorta bone marrow, femur bone marrow, sternum	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, mild</li> <li>within normal limits</li> <li>hyperplasia, mixed, mild</li> <li>hyperplasia, mixed, mild</li> </ul>

D - Died on Study

Group,			Termina
Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1383	D	Microscopic	
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- not examined
			autolysis too severe for diagnosis
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
			- pyelitis, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1383	D	Microscopic	
		liver	- focus of cellular alteration, basophilic, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, axillary	- hyperplasia, lymphocyte/plasmacyte, medulla, mild
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1383	D	Microscopic	
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, mild
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits

Group,

1384

#### Combined Chronic Toxicity/Oncogenicity Study 2-Year Oral Gavage Study in Rats

#### **Individual Animal Listing - FEMALE** Terminal

Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1383	D	Microscopic	
		thymus	<ul> <li>depletion, lymphoid, generalized, moderate</li> </ul>
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	<ul> <li>granular cell tumor, benign, primary, incidental, not cause of death</li> </ul>
		Cause of Death	- mammary tumor

left.

- within normal limits

draining node for mass c and mass f, right and mass d, mass e,

Ε

Macroscopic lymph node, axillary

E - Euthanized in extremis

D - Died on Study

Fate	Tissue	Observations
E	Macroscopic	
	lymph node, inguinal	<ul> <li>not identified, bilateral, no grade</li> </ul>
		draining node for mass a and mass g, left and mass b and mass h, right.
	lymph node, mandibular	- within normal limits
		draining node for mass i, right.
	pituitary gland	- enlarged, red, mild
	Fate E	E <b>Macroscopic</b> lymph node, inguinal lymph node, mandibular

Group, Animal Number	Fate	Tissue	Observations
<u>0 mg/kg/day</u> 1384	E	Macroscopic skin, subcutis	<ul> <li>mass, black, mass b, right inguinal area, present corresponds to antemortem observation (mass 2) approximately 3.5 x 3.0 x 1.2 cm.</li> <li>mass, red, mass d, left axillary area, present corresponds to antemortem observation (mass 4) approximately 1.5 cm in diameter.</li> <li>mass, red, mass i, right lateral neck, present approximately 1.5 cm in diameter.</li> <li>mass, tan, mass a, left inguinal area, present corresponds to antemortem observation (mass 1) approximately 1.5 cm in diameter.</li> <li>mass, tan, mass c, right axillary area, present corresponds to antemortem observation (mass 3) approximately 1.0 cm in diameter.</li> <li>mass, tan, mass e, left axillary area, present corresponds to antemortem observation (mass 5) approximately 2.5 x 2.0 x 1.0 cm.</li> <li>mass, tan, mass e, left anogenital region, present approximately 3.5 x 2.0 x 1.0 cm.</li> <li>mass, tan, mass h, right anogenital region, present approximately 3.0 x 2.0 x 1.3 cm.</li> <li>mass, ulcerated, mass f, right axillary area, present corresponds to antemortem observation (mass 6) approximately 3.0 x 2.5 x 1.0 cm, red.</li> </ul>

### Individual Animal Listing - FEMALE

 er	m	ıır	$\sim$

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1384	Е	Macroscopic	
		thymus	- small, severe
1384	E	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
			<ul> <li>hyperplasia, focal medullary, bilateral, mild</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), mild
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- hyperplasia, focal, unilateral, minimal
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
<u>0 mg/кд/day</u> 1384	E	Microscopic kidneys  lacrimal glands, exorbital large intestine, cecum large intestine, colon large intestine, rectum larynx liver lung lymph node, axillary lymph node, mandibular lymph node, mesenteric	<ul> <li>hyperplasia, transitional cell, bilateral, minimal</li> <li>mineralization, pelvic, unilateral, minimal</li> <li>nephropathy, chronic progressive, unilateral, minimal</li> <li>pyelitis, unilateral, minimal</li> <li>within normal limits</li> <li>infiltration, mononuclear cell, minimal</li> <li>histiocytosis, alveolar, minimal</li> <li>within normal limits</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
mg/kg/day			
1384	Е	Microscopic	
		mammary gland	<ul> <li>adenocarcinoma, malignant, multiple, primary, mortality-independent</li> </ul>
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b; skin, subcutis - mass c; skin, subcutis - mass d; skin, subcutis - mass e; skin, subcutis - mass f; skin, subcutis - mass g; skin, subcutis - mass h; skin, subcutis - mass i)
			- hyperplasia, lobular, minimal
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1384	Е	Microscopic	
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1384	E	Microscopic	
		thymus	<ul> <li>depletion, lymphoid, generalized, moderate</li> <li>corresponds to macroscopic observation (thymus - small)</li> <li>hyperplasia, epithelial cell, minimal</li> </ul>
		thyroid gland	<ul> <li>adenoma, c-cell, benign, unilateral, primary, incidental, not cause of death</li> </ul>
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, minimal
		vagina	- within normal limits
		Cause of Death	- mammary tumor
1385	E	<b>Macroscopic</b> lymph node, axillary	<ul> <li>within normal limits draining node for mass a, right.</li> </ul>

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1385	E	Macroscopic	
		skin, subcutis	- mass, ulcerated, mass a, right axillary area, present
			corresponds to antemortem observation (hair sparse scabbed area mass 1)
			approximately 6.0 cm in diameter, tan.
1385	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
			- hyperplasia, focal cortical, unilateral, minimal
			one medulla present
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- angiectasis, mild
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- astrocytoma, malignant, primary, incidental, not cause of death
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations	
0 mg/kg/day				
1385	Е	Microscopic		
		eyes, retina	- within normal limits	
		galt	- within normal limits	
		harderian glands	- hyperplasia, focal, unilateral, minimal	
		heart	- within normal limits	
		joint, tibiofemoral	- within normal limits	
		kidneys	- mineralization, pelvic, bilateral, minimal	
		lacrimal glands, exorbital	- within normal limits	
		large intestine, cecum	- within normal limits	
		large intestine, colon	- within normal limits	
		large intestine, rectum	- within normal limits	
		larynx	- within normal limits	
		liver	- hematopoiesis, extramedullary, minimal	
			- hyperplasia, bile duct, mild	
		lung	- histiocytosis, alveolar, minimal	
		lymph node, axillary	- within normal limits	
		lymph node, mandibular	- within normal limits	
		lymph node, mesenteric	- within normal limits	

Group, Animal Number	Fate	Tissue	Observations
) mg/kg/day			
1385	Е	Microscopic	
		mammary gland	- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	- within normal limits
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- degeneration/necrosis, myofiber, minimal
		skin	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
<u>0 mg/kg/day</u> 1385	E	Microscopic small intestine, duodenum small intestine, ileum small intestine, jejunum spinal cord, cervical spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus thyroid gland  tongue trachea ureters urinary bladder uterus with cervix	<ul> <li>within normal limits</li> <li>hematopoiesis, extramedullary, increased, minimal</li> <li>within normal limits</li> <li>within normal limits</li> <li>depletion, lymphoid, generalized, moderate</li> <li>adenoma, c-cell, benign, unilateral, primary, incidental, not cause of death</li> <li>hyperplasia, follicular cell, unilateral, minimal</li> <li>within normal limits</li> </ul>
		-	

			Tomma
Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1385	E	Microscopic	
		Cause of Death	- mammary tumor
1386	E	Macroscopic	
		pituitary gland	- enlarged, red, severe
1386	E	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		-	

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1386	E	Microscopic	
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, eosinophilic, minimal
			- infiltration, mononuclear cell, minimal
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1386	Е	Microscopic	
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, minimal
		oviducts	- within normal limits
		pancreas	<ul> <li>adenoma, islet cell, benign, primary, incidental, not cause of death</li> </ul>
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1386	Е	Microscopic	
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	<ul> <li>adenoma, c-cell, benign, unilateral, primary, incidental, not cause of death</li> </ul>
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1387	E	Macroscopic	
		adrenal glands	- enlarged, right, moderate
		mammary gland	- swollen/thickened, cervical, inguinal, mild
		pituitary gland	- enlarged, severe
1387	Е	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
			corresponds to macroscopic observation (adrenal glands - enlarged)
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits

Group,			Totalina
Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1387	E	Microscopic	
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- nephropathy, chronic progressive, unilateral, minimal
			- pyelitis, unilateral, mild
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- within normal limits
		lung	- within normal limits
		lymph node, mandibular	- erythrocytosis/erythrophagocytosis, sinus, mild
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
			corresponds to macroscopic observation (mammary gland - swollen/thickened)
		nerve, sciatic	- degeneration, axonal/myelin, minimal

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1387	Е	Microscopic	
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1387	E	Microscopic	
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	<ul> <li>depletion, lymphoid, generalized, moderate</li> </ul>
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1388	E	Macroscopic	
		pituitary gland	- enlarged, red, severe
1388	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, unilateral, minimal</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
		110000	
0 mg/kg/day	_		
1388	E	Microscopic	
		kidneys	- mineralization, pelvic, bilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal
			- pyelitis, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hyperplasia, bile duct, minimal
			- infiltration, mononuclear cell, minimal
			- vacuolation, periportal, mild
		lung	<ul> <li>infiltration, lymphoid, perivascular, mild</li> </ul>
		lymph node, mandibular	<ul> <li>erythrocytosis/erythrophagocytosis, sinus, mild</li> </ul>
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, minimal
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1388	Е	Microscopic	
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- fibrosis, minimal
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1388	E	Microscopic spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	<ul> <li>within normal limits</li> <li>depletion, lymphoid, generalized, moderate</li> <li>within normal limits</li> <li>pituitary tumor</li> </ul>
1389	S	Macroscopic liver	- focus/foci, red, multiple lobes, mild

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1389	S	Macroscopic	
		lymph node, inguinal	<ul> <li>not identified, bilateral, no grade</li> </ul>
		-	draining node for mass a and b.
		skin, subcutis	- mass, tan, mass a, left inguinal area, present
			corresponds to antemortem observation (mass 1)
			approximately 5.0 cm in diameter.
			- mass, tan, mass b, right inguinal area, present
			corresponds to antemortem observation (swelling)
			approximately 1.0 cm in diameter.
		uterus with cervix	- enlarged, horn, mild
1389	S	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1389	S	Microscopic eyes eyes, optic nerves eyes, retina galt harderian glands heart joint, tibiofemoral kidneys  lacrimal glands, exorbital large intestine, cecum large intestine, colon large intestine, rectum larynx	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>hyperplasia, focal, unilateral, minimal</li> <li>cardiomyopathy, minimal</li> <li>within normal limits</li> <li>mineralization, pelvic, unilateral, minimal</li> <li>mineralization, tubular, bilateral, minimal</li> <li>nephropathy, chronic progressive, bilateral, minimal</li> <li>within normal limits</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
) mg/kg/day			
1389	S	Microscopic	
		liver	- degeneration, cystic, focal, minimal
			- dilatation, cystic, bile ducts, mild
			- focus of cellular alteration, basophilic, mild
			- hyperplasia, bile duct, mild
			- vacuolation, periportal, minimal
		lung	- inflammation, subacute/chronic, minimal
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- fibroadenoma, benign, multiple, primary, mortality-independent
		, gama	corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)
			- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1389	S	Microscopic	
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- degeneration/necrosis, myofiber, minimal
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1389	S	Microscopic stomach, nonglandular thymus  thyroid gland tongue trachea ureters urinary bladder uterus with cervix  vagina non-correlated macro observation	<ul> <li>within normal limits</li> <li>depletion, lymphoid, generalized, moderate</li> <li>hyperplasia, lymphoid, medulla, mild</li> <li>hyperplasia, c-cell, focal, unilateral, mild</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>dilatation, gland/lumen, mild</li> <li>corresponds to macroscopic observation (uterus with cervix - enlarged)</li> <li>within normal limits</li> <li>liver - focus/foci, red</li> </ul>
1390	E	Macroscopic lymph node, axillary	- within normal limits draining node for mass b, right.

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1390	E	Macroscopic	
		lymph node, inguinal	- not identified, left, no grade
			draining node for mass a.
		lymph node, mandibular	- within normal limits
			draining node for mass c, left.
		pituitary gland	- enlarged, red, mild
		skin, subcutis	- mass, tan, mass a, left inguinal area, present
			corresponds to antemortem observation (mass 1)
			approximately 5.0 x 5.0 x 3.0 cm.
			- mass, tan, mass b, right axillary area, present
			corresponds to antemortem observation (mass 2)
			approximately 2.0 cm in diameter.
			- mass, tan, mass c, ventral neck, left, present
			corresponds to antemortem observation (mass 3)
			approximately 4.0 x 2.5 x 2.0 cm.
		spleen	- enlarged, mild
		thymus	- small, severe
		vagina	- prolapse, mild
			corresponds to antemortem observation (reproductive tract prolapsed)
1390	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, mild</li> </ul>

E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1390	Е	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- hyperplasia, granulocytic, mild
		bone marrow, sternum	- hyperplasia, granulocytic, mild
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- carcinoma, pars distalis, malignant, secondary
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- hyperplasia, focal, unilateral, minimal
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- hydronephrosis, unilateral, mild
			- hyperplasia, transitional cell, unilateral, minimal
			- mineralization, pelvic, unilateral, mild
			- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1390	Е	Microscopic	
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, axillary	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- abscess, severe
			corresponds to macroscopic observation (skin, subcutis - mass b)
			- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass c)
			- hyperplasia, lobular, moderate
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
) mg/kg/day			
1390	Е	Microscopic	
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, minimal
		oviducts	- within normal limits
		pancreas	- atrophy, acinar, minimal
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>carcinoma, pars distalis, malignant, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		skin, subcutis	<ul> <li>fibrosarcoma, malignant, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a)</li> </ul>
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1390	E	Microscopic	
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, moderate
			corresponds to macroscopic observation (spleen - enlarged)
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
			corresponds to macroscopic observation (thymus - small)
		thyroid gland	- within normal limits
		tongue	- inflammation, acute, minimal
		trachea	- within normal limits
		ureters	- dilatation, unilateral, mild
		urinary bladder	- within normal limits
		uterus with cervix	- hyperplasia, cervical fibromuscular, moderate
		vagina	- hyperplasia, fibromuscular, moderate
		-	- prolapse, no grade
			corresponds to macroscopic observation (vagina - prolapse)
		Cause of Death	- vagina; prolapse; no grade

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1391	Е	Macroscopic	
		all tissues	- within normal limits
1391	Е	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
			- hyperplasia, focal cortical, unilateral, minimal
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- hemorrhage, moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1391	Е	Microscopic	
		kidneys	- hyperplasia, transitional cell, unilateral, minimal
			- mineralization, pelvic, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			- focus of cellular alteration, eosinophilic, minimal
			- hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1391	E	Microscopic	
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, minimal
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1391	E	Microscopic	
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	<ul> <li>depletion, lymphoid, generalized, moderate</li> </ul>
			- hyperplasia, epithelial cell, minimal
		thyroid gland	<ul> <li>hyperplasia, c-cell, focal, unilateral, mild</li> </ul>
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1392	S	Macroscopic	
		mammary gland	- swollen/thickened, tan, generalized, mild
			corresponds to antemortem observation (swelling)
1392	S	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1392	S	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, mild
			- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
<u>o mg/kg/day</u> 1392	S	Microscopic large intestine, rectum larynx liver  lung lymph node, mandibular lymph node, mesenteric mammary gland	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>dilatation, cystic, bile ducts, minimal</li> <li>focus of cellular alteration, basophilic, mild</li> <li>hyperplasia, bile duct, minimal</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>adenoma, benign, primary, incidental, not cause of death very small, on slide 18-1.</li> </ul>
			<ul> <li>fibroadenoma, benign, primary, mortality-independent corresponds to macroscopic observation (mammary gland - swollen/thickened) slide 18-1.</li> </ul>
			<ul> <li>hyperplasia, lobular, mild corresponds to macroscopic observation (mammary gland - swollen/thickened)</li> </ul>
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- inflammation, minimal

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1392	S	Microscopic	
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- degeneration/necrosis, myofiber, minimal
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1392	S	Microscopic spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus  thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>hematopoiesis, extramedullary, increased, minimal</li> <li>within normal limits</li> <li>within normal limits</li> <li>depletion, lymphoid, generalized, moderate</li> <li>hyperplasia, epithelial cell, mild</li> <li>hyperplasia, c-cell, focal, bilateral, minimal</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>dilatation, gland/lumen, mild</li> <li>within normal limits</li> </ul>
1393	E	Macroscopic adrenal glands	- enlarged, right, mild

S - Scheduled necropsy E - Euthanized *in extremis* 

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1393	Е	Macroscopic	
		bone, mandible	- mass, ulcerated, mass b, left, present
			corresponds to antemortem observation (mass 2)
			approximately 4.5 x 2.0 x 2.5 cm, tan.
		lymph node, inguinal	- not identified, left, no grade
			draining node for mass a.
		lymph node, mandibular	- within normal limits
			draining node for mass b, left.
		pituitary gland	- enlarged, moderate
		skin, subcutis	- mass, tan, mass a, left inguinal area, present
			corresponds to antemortem observation (mass 1)
			approximately 5.5 x 4.5 x 2.5 cm.
		thymus	- small, moderate
		tooth/teeth	<ul> <li>absent/broken/malocclusion/overgrown, no grade</li> </ul>
			corresponds to antemortem observation (malocclusion)
		uterus with cervix	- enlarged, horn, mild
1393	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
			corresponds to macroscopic observation (adrenal glands - enlarged)

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1393	E	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- hyperplasia, granulocytic, mild
		bone marrow, sternum	- hyperplasia, granulocytic, minimal
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- hyperplasia, transitional cell, unilateral, mild
		•	- mineralization, pelvic, bilateral, minimal
			- nephropathy, chronic progressive, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		-	

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1393	E	Microscopic	
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	<ul> <li>focus of cellular alteration, basophilic, mild</li> </ul>
			- hyperplasia, bile duct, minimal
			<ul> <li>infiltration, mononuclear cell, minimal</li> </ul>
			- inflammation, acute, minimal
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	<ul> <li>fibroadenoma, benign, primary, mortality-independent</li> </ul>
			corresponds to macroscopic observation (skin, subcutis - mass a)
			<ul> <li>hyperplasia, lobular, mild</li> </ul>
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1393	E	Microscopic	
		oviducts	- within normal limits
		pancreas	- atrophy, acinar, minimal
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- atrophy, moderate
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1393	Е	Microscopic	
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	<ul> <li>depletion, lymphoid, generalized, severe</li> </ul>
			corresponds to macroscopic observation (thymus - small)
		thyroid gland	<ul> <li>hyperplasia, c-cell, focal, unilateral, mild</li> </ul>
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, moderate
			corresponds to macroscopic observation (uterus with cervix - enlarged)
		vagina	- within normal limits
		zymbal`s gland	<ul> <li>carcinoma, sebaceous cell, malignant, unilateral, primary, mortality-independent corresponds to macroscopic observation (bone, mandible - mass b)</li> </ul>
		Cause of Death	- zymbals gland tumor

Macroscopic lymph node, axillary lymph node, mandibular pituitary gland skin, subcutis	<ul> <li>within normal limits draining node for mass b, right.</li> <li>within normal limits draining node for mass a, right.</li> <li>enlarged, severe</li> <li>mass, tan, mass a, cervical, right, present</li> </ul>	
lymph node, axillary lymph node, mandibular pituitary gland	draining node for mass b, right.  - within normal limits draining node for mass a, right.  - enlarged, severe  - mass, tan, mass a, cervical, right, present	
lymph node, mandibular	draining node for mass b, right.  - within normal limits draining node for mass a, right.  - enlarged, severe  - mass, tan, mass a, cervical, right, present	
pituitary gland	<ul> <li>within normal limits</li> <li>draining node for mass a, right.</li> <li>enlarged, severe</li> <li>mass, tan, mass a, cervical, right, present</li> </ul>	
pituitary gland	draining node for mass a, right enlarged, severe - mass, tan, mass a, cervical, right, present	
	<ul><li>enlarged, severe</li><li>mass, tan, mass a, cervical, right, present</li></ul>	
	- mass, tan, mass a, cervical, right, present	
skin, subcutis		
	corresponds to enterportem absorbation (mass 1)	
	corresponds to antemortem observation (mass 1)	
	approximately 1.5 cm in diameter.	
	- mass, tan, mass b, right axillary area, present	
	corresponds to antemortem observation (mass 2)	
	approximately 1.5 cm in diameter.	
Microscopic		
adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>	
	<ul> <li>hyperplasia, focal cortical, unilateral, mild</li> </ul>	
aorta	- within normal limits	
bone marrow, femur	- within normal limits	
bone marrow, sternum	- within normal limits	
	adrenal glands  aorta  bone marrow, femur	corresponds to antemortem observation (mass 2) approximately 1.5 cm in diameter.  Microscopic adrenal glands - angiectasis/cystic degeneration, focal cortical, bilateral, minimal - hyperplasia, focal cortical, unilateral, mild aorta - within normal limits bone marrow, femur - within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1394	E	Microscopic	
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- hydronephrosis, unilateral, mild
		•	- mineralization, pelvic, unilateral, minimal
			- pyelitis, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1394	Е	Microscopic	
		liver	- focus of cellular alteration, basophilic, mild
			- hyperplasia, bile duct, minimal
		lung	- granuloma, minimal
		lymph node, axillary	- within normal limits
		lymph node, mandibular	- erythrocytosis/erythrophagocytosis, sinus, mild
		lymph node, mesenteric	- within normal limits
		mammary gland	<ul> <li>adenocarcinoma, malignant, multiple, primary, mortality-independent</li> </ul>
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)
			<ul> <li>adenoma, benign, primary, incidental, not cause of death slide 18.</li> </ul>
			- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- hyperplasia, sex-cord/stromal, bilateral, minimal

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1394	Е	Microscopic	
		oviducts	- within normal limits
		pancreas	<ul> <li>adenoma, islet cell, benign, primary, incidental, not cause of death</li> </ul>
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- degeneration/necrosis, myofiber, minimal
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1394	Е	Microscopic	
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, mild
		thyroid gland	<ul> <li>adenoma, c-cell, benign, unilateral, primary, incidental, not cause of death</li> </ul>
			<ul> <li>hyperplasia, c-cell, focal, unilateral, mild</li> </ul>
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- dilatation, unilateral, mild
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1395	E	Macroscopic	
		pituitary gland	- enlarged, red, moderate

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1395	Е	Macroscopic	
		skin .	- hair sparse, dorsal cervical region, dorsal thoracic region, mild
			corresponds to antemortem observation (hair sparse)
1395	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1395	E	Microscopic joint, tibiofemoral kidneys lacrimal glands, exorbital large intestine, cecum large intestine, colon large intestine, rectum	<ul> <li>within normal limits</li> <li>mineralization, pelvic, bilateral, minimal</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> </ul>
		larynx liver lung lymph node, mandibular lymph node, mesenteric mammary gland	<ul> <li>within normal limits</li> <li>hyperplasia, bile duct, minimal</li> <li>within normal limits</li> <li>erythrocytosis/erythrophagocytosis, sinus, mild</li> <li>within normal limits</li> <li>hyperplasia, lobular, minimal</li> </ul>
		nerve, sciatic nose, level a nose, level b nose, level c nose, level d ovaries oviducts	<ul> <li>within normal limits</li> </ul>

Group,

#### Combined Chronic Toxicity/Oncogenicity Study 2-Year Oral Gavage Study in Rats

### Individual Animal Listing - FEMALE Terminal

Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1395	Е	Microscopic	
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- alopecia/hypotrichosis, mild
			corresponds to macroscopic observation (skin - hair sparse)
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits

- within normal limits

- within normal limits

- within normal limits

- within normal limits

small intestine, jejunum

spinal cord, cervical

spinal cord, lumbar

spinal cord, thoracic

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1395	Е	Microscopic	
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- not examined
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1396	E	Macroscopic	
		pituitary gland	- enlarged, red, severe
1396	Е	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1396	Е	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- nephropathy, chronic progressive, unilateral, minimal
		•	- pyelitis, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1396	Е	Microscopic	
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hyperplasia, bile duct, minimal
			<ul> <li>infiltration, mononuclear cell, minimal</li> </ul>
			<ul> <li>vacuolation, periportal, moderate</li> </ul>
		lung	- histiocytosis, alveolar, minimal
		lymph node, mandibular	<ul> <li>erythrocytosis/erythrophagocytosis, sinus, minimal</li> </ul>
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	<ul> <li>degeneration, axonal/myelin, minimal</li> </ul>
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, minimal
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1396	Е	Microscopic	
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- degeneration/necrosis, myofiber, minimal
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- hyperplasia, epithelial, nonglandular, moderate
			- inflammation, mild

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1396	E	Microscopic	
		thymus	<ul> <li>depletion, lymphoid, generalized, severe</li> </ul>
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	<ul> <li>hyperplasia, simple transitional cell, moderate</li> </ul>
			- inflammation, minimal
		uterus with cervix	<ul> <li>granular cell tumor, benign, primary, incidental, not cause of death</li> </ul>
			- hyperplasia, squamous cell, mild
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1397	D	Macroscopic	
		lymph node, inguinal	- not identified, right, no grade
			draining node for mass a.
		pituitary gland	- enlarged, red, severe

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1397	D	Macroscopic	
		skin .	- abrasion/scab, red, right axillary area, mild
			corresponds to antemortem observation (scabbed area hair sparse)
		skin, subcutis	- mass, firm, mass a, right anogenital region, present
			corresponds to antemortem observation (swelling)
			approximately 3.3 x 2.8 x 1.8 cm, tan.
1397	D	Microscopic	
		adrenal glands	- hyperplasia, focal cortical, unilateral, minimal
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- not examined
			autolysis too severe for diagnosis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1397	D	Microscopic	
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- dilatation, tubular, bilateral, minimal
			- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, unilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			- hyperplasia, bile duct, minimal
			- vacuolation, periportal, minimal
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		* *	- erythrocytosis/erythrophagocytosis, sinus, minimal
		lymph node, mesenteric	- erythrocytosis/erythrophagocytosis, sinus, minimal

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1397	D	Microscopic	
		mammary gland	- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
) mg/kg/day			
1397	D	Microscopic	
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- adenoma, basal cell, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin - abrasion/scab)
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	<ul> <li>depletion, lymphoid, generalized, moderate</li> </ul>
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits

	Tissue	Observations
D	Microscopic	
	uterus with cervix	- within normal limits
	vagina	- within normal limits
	Cause of Death	- pituitary tumor
Е	Macroscopic	
	lymph node, axillary	- within normal limits
		draining node for mass a, left.
	mammary gland	- swollen/thickened, tan, generalized, moderate
	pituitary gland	- enlarged, red, moderate
	skin, subcutis	- mass, tan, mass a, left axillary area, present
		corresponds to antemortem observation (mass 1)
		approximately 3.5 cm in diameter.
	stomach, nonglandular	- irregular surface, tan, mild
Ε	Microscopic	
	adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
		- hyperplasia, focal medullary, bilateral, mild
	E	uterus with cervix vagina Cause of Death  E Macroscopic lymph node, axillary  mammary gland pituitary gland skin, subcutis  stomach, nonglandular E Microscopic

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1398	Е	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- hyperplasia, focal, unilateral, minimal
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, bilateral, minimal
			- nephropathy, chronic progressive, bilateral, mild
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1398	E	Microscopic	
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	<ul> <li>focus of cellular alteration, basophilic, minimal</li> </ul>
			<ul> <li>hyperplasia, bile duct, minimal</li> </ul>
			<ul> <li>infiltration/inflammation, mixed cell, minimal</li> </ul>
			<ul> <li>vacuolation, centrilobular, moderate</li> </ul>
		lung	- histiocytosis, alveolar, minimal
		lymph node, axillary	- not examined
			misidentified tissue
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	<ul> <li>adenocarcinoma, malignant, primary, incidental, not cause of death</li> </ul>
			small, slide 18.
			- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, moderate
			corresponds to macroscopic observation (mammary gland - swollen/thickened)
		nerve, sciatic	<ul> <li>degeneration, axonal/myelin, minimal</li> </ul>

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1398	Е	Microscopic	
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, mild
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1398	Е	Microscopic	
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- erosion/ulcer, mild
		stomach, nonglandular	- hyperplasia, epithelial, nonglandular, moderate
			corresponds to macroscopic observation (stomach, nonglandular - irregular surface)
			- inflammation, mild
		thymus	- depletion, lymphoid, generalized, severe
			- hyperplasia, epithelial cell, mild
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1398	E	Microscopic uterus with cervix vagina Cause of Death	<ul><li>within normal limits</li><li>within normal limits</li><li>pituitary tumor</li></ul>
1399	E	<b>Macroscopic</b> skin	<ul> <li>absent portion/cannibalized, left hindleg/limb, left ventral abdomen, no grade corresponds to antemortem observation (laceration)</li> </ul>
1399	E	Microscopic adrenal glands  aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, mild one medulla present</li> <li>within normal limits</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1399	E	Microscopic	
		brain .	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
			- mineralization, tubular, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- within normal limits
		lung	- within normal limits
		lymph node, mandibular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations	
0 mg/kg/day				
1399	E	Microscopic		
		lymph node, mesenteric	- within normal limits	
		mammary gland	- hyperplasia, lobular, minimal	
		nerve, sciatic	- within normal limits	
		nose, level a	- within normal limits	
		nose, level b	- within normal limits	
		nose, level c	- within normal limits	
		nose, level d	- within normal limits	
		ovaries	- within normal limits	
		oviducts	- within normal limits	
		pancreas	- within normal limits	
		parathyroid glands	- within normal limits	
			one of pair present	
		pharynx	- within normal limits	
		pituitary gland	- within normal limits	
		salivary gland, mandibular	- within normal limits	
		salivary gland, parotid	- within normal limits	
		salivary gland, sublingual	- within normal limits	
		skeletal muscle, biceps femoris	- within normal limits	
		skin	- within normal limits	

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1399	E	Microscopic	
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- loss of hindlimb function, cause undetermined.

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1400	E	Macroscopic	
		adrenal glands	- enlarged, left, mild
		kidneys	- focus/foci, tan, bilateral, mild
		lung with bronchi	<ul> <li>focus/foci, tan, multiple lobes, mild</li> </ul>
		lymph node, inguinal	- not identified, left, no grade
			draining node for mass b. draining node for mass c, right.
		pituitary gland	- enlarged, red, severe
		skin	- abrasion/scab, ventral neck, mild
			corresponds to antemortem observation (scabbed area)
		skin, subcutis	- mass, tan, mass b, left inguinal area, present
			corresponds to antemortem observation (mass 2)
			approximately 2.0 cm in diameter.
			- mass, tan, mass c, right inguinal area, present
			corresponds to antemortem observation (mass 3)
			approximately 3.0 cm in diameter.
		uterus with cervix	- enlarged, red, horn, mild
1400	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, unilateral, moderate</li> </ul>
			corresponds to macroscopic observation (adrenal glands - enlarged)

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1400	Е	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), mild
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, mild
		•	- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1400	E	Microscopic	
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hyperplasia, bile duct, minimal
			- vacuolation, periportal, minimal
		lung	- histiocytosis, alveolar, mild
			corresponds to macroscopic observation (lung with bronchi - focus/foci, tan)
		lymph node, inguinal	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1400	Е	Microscopic	
		mammary gland	<ul> <li>adenocarcinoma, malignant, multiple, primary, mortality-independent</li> <li>corresponds to macroscopic observation (skin - abrasion/scab; skin, subcutis - mass b; skin, subcutis - mass c)</li> <li>slide 18-1, 26-1, and 26-2.</li> <li>hyperplasia, lobular, mild</li> </ul>
		nerve, sciatic	<ul> <li>degeneration, axonal/myelin, minimal</li> </ul>
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	<ul> <li>within normal limits         one of pair present</li> </ul>
		pharynx	- within normal limits

E - Euthanized in extremis

### Individual Animal Listing - FEMALE Terminal

Group, Observations Animal Number Fate Tissue 0 mg/kg/day 1400 Ε Microscopic pituitary gland - adenoma, pars distalis, benign, primary, fatal, positive cause of death corresponds to macroscopic observation (pituitary gland enlarged) salivary gland, mandibular - within normal limits salivary gland, parotid - within normal limits salivary gland, sublingual - within normal limits skeletal muscle, biceps femoris - within normal limits - within normal limits skin small intestine, duodenum - within normal limits small intestine, ileum - within normal limits small intestine, jejunum - within normal limits spinal cord, cervical - within normal limits spinal cord, lumbar - within normal limits spinal cord, thoracic - within normal limits spleen - within normal limits stomach, glandular - within normal limits stomach, nonglandular - within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1400	E	Microscopic	
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- hyperplasia, squamous cell, mild
			- inflammation, subacute/chronic, mild
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- polyp, stromal, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (uterus with cervix - enlarged)
		vagina	- within normal limits
		non-correlated macro observation	- kidneys - focus/foci, tan
		Cause of Death	- pituitary tumor
1 mg/kg/day			
1411	Е	Macroscopic	
		pituitary gland	- enlarged, red, severe
			<del>-</del>

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1411	E	Macroscopic	
		thymus	- small, mild
1411	E	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, minimal</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	<ul> <li>compression, ventral (pituitary tumor), moderate</li> </ul>
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1411	E	Microscopic	
		kidneys	- mineralization, pelvic, unilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal
			- pyelitis, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- within normal limits
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, minimal
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1411	E	Microscopic	
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		-	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1411	Е	Microscopic	
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe
			corresponds to macroscopic observation (thymus - small)
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1412	Е	Macroscopic	
		lymph node, inguinal	- not identified, bilateral, no grade
			draining node for mass a and mass b, right and mass c, left.

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1412	E	Macroscopic mammary gland pituitary gland skin, subcutis	<ul> <li>swollen/thickened, tan, mild</li> <li>enlarged, red, mild</li> <li>mass, tan, mass b, right inguinal area, present corresponds to antemortem observation (mass 2) approximately 5.0 x 5.0 x 1.0 cm.</li> <li>mass, tan, mass c, left inguinal area, present corresponds to antemortem observation (mass 3) approximately 8.0 x 9.0 x 4.0 cm.</li> <li>mass, ulcerated, mass a, anogenital region, present corresponds to antemortem observation (mass 1 hair sparse) approximately 5.0 x 5.0 x 3.0 cm, tan.</li> </ul>
1412	E	Microscopic adrenal glands aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, mild</li> <li>within normal limits</li> <li>hyperplasia, granulocytic, mild</li> <li>hyperplasia, granulocytic, minimal</li> <li>within normal limits</li> <li>within normal limits</li> </ul>

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1412	E	Microscopic	
		brain .	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			<ul> <li>nephropathy, chronic progressive, bilateral, minimal</li> </ul>
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			- hematopoiesis, extramedullary, minimal
			<ul> <li>vacuolation, periportal, minimal</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
412	E	Microscopic	
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	<ul> <li>adenocarcinoma, malignant, multiple, primary, mortality-independent</li> </ul>
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)
			- hyperplasia, lobular, moderate
			corresponds to macroscopic observation (mammary gland - swollen/thickened)
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, minimal
		oviducts	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1412	Е	Microscopic	
		pancreas	<ul> <li>adenoma, islet cell, benign, primary, incidental, not cause of death</li> </ul>
			- atrophy, acinar, mild
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, incidental, not cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		skin, subcutis	- fibroma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass c)
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1 mg/kg/day 1412	E	Microscopic small intestine, jejunum spinal cord, cervical spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus  thyroid gland tongue trachea ureters	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>hematopoiesis, extramedullary, increased, mild</li> <li>within normal limits</li> <li>within normal limits</li> <li>depletion, lymphoid, generalized, mild</li> <li>hyperplasia, epithelial cell, minimal</li> <li>within normal limits</li> </ul>
		urinary bladder uterus with cervix vagina Cause of Death	<ul> <li>within normal limits</li> <li>within normal limits</li> <li>within normal limits</li> <li>mammary tumor</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1413	D	Macroscopic adrenal glands lymph node, axillary	<ul> <li>enlarged, left, mild</li> <li>within normal limits</li> <li>draining node for mass a, left and draining node for mass b,</li> </ul>
		lymph node, inguinal	right not identified, right, no grade draining node for mass c.
		mammary gland pituitary gland	<ul> <li>swollen/thickened, tan, generalized, moderate</li> <li>enlarged, moderate</li> </ul>
		skin, subcutis	<ul> <li>mass, tan, mass a, left axillary area, present corresponds to antemortem observation (mass 1) approximately 4.0 x 4.0 x 1.0 cm.</li> <li>mass, tan, mass b, right axillary area, present corresponds to antemortem observation (hair sparse mass 2) approximately 5.0 x 3.0 x 1.0 cm.</li> <li>mass, tan, mass c, right inguinal area, present corresponds to antemortem observation (nodule) approximately 4.5 x 3.0 x 1.0 cm.</li> </ul>

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1413	D	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, unilateral, severe</li> </ul>
			corresponds to macroscopic observation (adrenal glands - enlarged)
		aorta	- within normal limits
		bone marrow, femur	- hyperplasia, granulocytic, mild
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	<ul> <li>compression, ventral (pituitary tumor), moderate</li> </ul>
			- hemorrhage, minimal
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits

Group, Animal Number	Fate	Tissue	Observations	
1 mg/kg/day				
1413	D	Microscopic		
		kidneys	- mineralization, pelvic, unilateral, minimal	
			- mineralization, tubular, unilateral, minimal	
		lacrimal glands, exorbital	- within normal limits	
		large intestine, cecum	- within normal limits	
		large intestine, colon	- within normal limits	
		large intestine, rectum	- within normal limits	
		larynx	- within normal limits	
		liver	- hyperplasia, bile duct, minimal	
			- vacuolation, periportal, minimal	
		lung	- within normal limits	
		lymph node, axillary	- within normal limits	
		lymph node, mandibular	- within normal limits	
		lymph node, mesenteric	- within normal limits	

Group, Inimal Number	Fate	Tissue	Observations
mg/kg/day			
413	D	Microscopic	
		mammary gland	<ul> <li>adenocarcinoma, malignant, multiple, primary, mortality-independent</li> <li>corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)</li> <li>fibroadenoma, benign, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass c)</li> <li>hyperplasia, lobular, moderate corresponds to macroscopic observation (mammary gland -</li> </ul>
		nerve, sciatic	swollen/thickened) - within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1413	D	Microscopic	
		pharynx	- within normal limits
		pituitary gland	<ul> <li>adenoma, pars distalis, benign, primary, fatal, positive cause of death</li> </ul>
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits

Fate	Tissue	Observations
D	Microscopic	
	thymus	- depletion, lymphoid, generalized, moderate
	thyroid gland	<ul> <li>carcinoma, follicular cell, malignant, unilateral, primary, incidental, not cause of death</li> </ul>
	tongue	- within normal limits
	trachea	- within normal limits
	ureters	- within normal limits
	urinary bladder	- within normal limits
	uterus with cervix	- dilatation, gland/lumen, mild
	vagina	- within normal limits
	Cause of Death	- pituitary tumor
D	Macroscopic	
	lymph node, axillary	- within normal limits
		draining node for mass a, right.
	pituitary gland	- enlarged, red, mild
	skin, subcutis	- mass, tan, mass a, right axillary area, present
		corresponds to antemortem observation (swelling)
		approximately 1.0 cm in diameter.
	D	D Microscopic thymus thyroid gland  tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death  D Macroscopic lymph node, axillary  pituitary gland

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1414	D	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, unilateral, minimal</li> </ul>
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- not examined
			autolysis too severe for diagnosis
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, unilateral, minimal

	Fate	Tissue	Observations	
1 mg/kg/day				
1414	D	Microscopic		
		lacrimal glands, exorbital	- within normal limits	
		large intestine, cecum	- within normal limits	
		large intestine, colon	- within normal limits	
		large intestine, rectum	- within normal limits	
		larynx	- within normal limits	
		liver	<ul> <li>vacuolation, periportal, minimal</li> </ul>	
		lung	- within normal limits	
		lymph node, axillary	- within normal limits	
		lymph node, mandibular	- within normal limits	
		lymph node, mesenteric	- within normal limits	
		mammary gland	- hyperplasia, lobular, mild	
		nerve, sciatic	- within normal limits	
		nose, level a	- within normal limits	
		nose, level b	- within normal limits	
		nose, level c	- within normal limits	
		nose, level d	- within normal limits	
		ovaries	- within normal limits	
		oviducts	- within normal limits	
		pancreas	- within normal limits	

Group,

Animal Number

Fate

Tissue

#### Combined Chronic Toxicity/Oncogenicity Study 2-Year Oral Gavage Study in Rats

### Individual Animal Listing - FEMALE Terminal

7			
<u>1 mg/kg/day</u> 1414	D	<b>Microscopic</b> parathyroid glands	- not examined
		pharynx	- within normal limits

pituitary gland - adenoma, pars distalis, benign, primary, incidental, not cause of death corresponds to macroscopic observation (pituitary gland - enlarged) salivary gland, mandibular - within normal limits salivary gland, parotid - within normal limits

corresponds to macroscopic observation (skin, subcutis - mass a)

Observations

salivary gland, parotid - Within normal limits
salivary gland, sublingual - within normal limits
skeletal muscle, biceps femoris - within normal limits
skin - cyst, keratin, minimal
skin, subcutis - fibroma, benign, primary, mortality-independent

small intestine, duodenum - within normal limits small intestine, ileum - within normal limits small intestine, jejunum - within normal limits spinal cord, cervical - within normal limits spinal cord, lumbar - within normal limits

spinal cord, lumbar - within normal limits spinal cord, thoracic - within normal limits

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1414	D	Microscopic	
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	<ul> <li>depletion, lymphoid, generalized, moderate</li> </ul>
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- undetermined
1415	D	Macroscopic	
		lymph node, axillary	- within normal limits
		•	draining node for mass a, right.
		mammary gland	- swollen/thickened, tan, generalized, mild
		pituitary gland	- enlarged, red, severe

D - Died on Study

### Individual Animal Listing - FEMALE

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Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1415	D	Macroscopic	
		skin, subcutis	- mass, red, mass a, right axillary area, present
			corresponds to antemortem observation (mass 1)
			approximately 4.0 cm in diameter.
1415	D	Microscopic	
		adrenal glands	<ul> <li>angiectasis/cystic degeneration, focal cortical, bilateral, moderate</li> </ul>
			one medulla present
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- not examined
			autolysis too severe for diagnosis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1415	D	Microscopic	
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
			- mineralization, tubular, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hyperplasia, bile duct, minimal
		lung	- within normal limits
		lymph node, axillary	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits

1 mg/kg/day			
1415	D	Microscopic	
		mammary gland	- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild
			corresponds to macroscopic observation (mammary gland - swollen/thickened)
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- exudate, nasal passage, mild
			- foreign material, minimal
			plant.
		nose, level b	- exudate, nasal passage, minimal
			- foreign material, minimal
			plant.
		nose, level c	exudate, nasal passage, mild
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- atrophy, acinar, mild
		parathyroid glands	- within normal limits
		. , ,	one of pair present

D - Died on Study